CHARACTERISTICS VIEWED IN THE ARTWORK OF LATENCY-AGED JUVENILE FIRESETTERS

A Thesis

Presented to

The Faculty of the College of Nursing and Health Professions

Drexel University

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

By

Megan Lee Charney

Creative Arts in Therapy / Art Therapy

August 2002

ABSTRACT

This study explores the graphic indicators in artwork of 30 child firesetters, between the ages of 6-12, who have been identified to be in high to low risk firesetting levels. The objective of the research was to develop a guide that would help to distinguish between levels of risk and assist in early prevention and intervention. There seems to be little literature written within the art therapy field that speaks to firesetters/firesetting behavior. For this reason, there seems to be a scarce amount of information in the field regarding characteristics in the artwork of a firesetter.

Ex post facto data (Kinetic-House-Tree-Person drawing (Burns, 1987)) was collected from the existing files of a local juvenile fire education and intervention program, located in a Fire Marshal's Office in New Jersey. It was analyzed using the Formal Elements Art Therapy Scale (Gantt & Tabone, 1998).

The hypothesis of this research was that there would be a direct correlation between the formal elements in the art productions and the fire risk levels. The results from this study will be used to help characterize the artwork of each of the three firesetting levels in order to develop a scale that can be used to rate the art productions of juvenile firesetters. With this information, risks can be identified and early intervention may be implemented.

Intraclass correlations were used to obtain inter-rater reliability. The Mean scores from the three raters showed that Level One firesetters tend to have the highest scores on 10 of the 13 scales. Level Two firesetters received the lowest scores in 10 of the 13 scales. Males' scores were higher than the females' scores in both Level One and Three. In conclusion, this researcher's credence that Level One firesetters would score the highest on the scales proved true. However, the results of Level Two and Level Three were thought to have been differently. Pearson product moment correlations indicated that the correlation between levels of risk and the FEATS scores were not statistically significant. A one-way ANOVA was run to find differences between groups, which compared males and females for level of risk and FEATS scores. These were also not statistically significant.

DEDICATION

I dedicate this thesis to my Mom and Dad

for all your support and prayers throughout the past two years.

Without your guidance,

along with my Heavenly Father,

I would not be where and who I am today!

To my Lord and Saviour,

You have made all things possible.

ACKNOWLEDGEMENTS

Thank you to my thesis committee members: Nancy Gerber, M.S., ATR-BC for all of the critiques and suggestions along the way to help mold this thesis into what it is today. Dr. John Lewis for all of your optimism, encouragement and insight in this process. Dr. Linda Gantt for developing and allowing me to use the FEATS for this study, as well as your proficient editing.

A special thank you to the three raters of this study: Beth Gallagher, M.A., ATR-BC, LPC; Jennifer Lemisch, M.A., ATR-BC, LPC; Tina Montagna-Tate, M.A., ATR-BC, LPC.

Much appreciation goes to Anthony Braig, Deputy Fire Marshal and research assistant, for your continuous positive attitude (even in the busiest of times), your faith in me and the "Andyisms" to keep me laughing.

I give my sincere gratitude to all of my friends in the program who have worked so hard throughout this two-year process of intense learning. I have truly learned something about life from all of you.

Thank you to my brother, Glenn, for reading my thesis when it did not make much sense. Your careful proofreading helped guide my writing.

To my sister, Amanda, thank you for allowing me to tie up the phone line to go on-line in order to send and check my messages to my thesis committee when I was home. And, also for Jasmine, our "princess"...without her, I would have lost my mind.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF PLATES

CHAPTER I

INTRODUCTION

The purpose of this study was to explore the graphic indicators in artwork of 30 child firesetters, between the ages of 6-12, who have been identified to be in high to low risk firesetting levels. The objective of the research was to develop a guide that would help to distinguish between levels of risk and assist in early prevention and intervention. Hamling (1995) stated, "One way of dealing with the problem of firesetting is to look for early warning of anyone likely to engage in such behavior and intervene.... Another approach is to place those already identified as firesetters into subgroups and deal with each separately" (p.1).

Ex post facto data (Kinetic-House-Tree-Person drawing (Burns, 1987)) was collected from the existing files of a local juvenile fire education and intervention program, located in a Fire Marshal's Office in New Jersey. It was analyzed using the 14 variables in the Formal Elements Art Therapy Scale (Gantt & Tabone, 1998) (Appendix A).

Fire has been used since the beginning of man for survival, however, recently it seems as though children have been using it as a behavioral expression for internal conflicts (Geller, 1992). Juvenile firesetting has occupied the attention of clinicians and

researchers since the 1950s (Lewis & Yarnell, 1951). A search of the literature has shown that there is a wide range of features associated with firesetting. Kolko and Kazdin (1986) reported, "There is a clear need for an analysis and integration of findings, especially in identifying robust individual variables that have implications for conceptualization, assessment, treatment, and prevention of firesetting" (p. 50). There seems to be little literature written within the art therapy field that deals with firesetters / firesetting behavior. Hence, there seems to be a deficient amount of information in the field regarding characteristics in the artwork of a firesetter.

The hypothesis of this research is that there will be a direct correlation between the formal elements in the art productions and the fire risk levels. The objective of this study is to develop a scale that can be used to rate the art productions of juvenile firesetters so that risks can be identified and early intervention can be implemented.

The limitations of the study may be that the results are not generalizable outside of the sample population because there was a small sample size as well as the fact that it was limited to one specific area (Southwest New Jersey). Additionally, the study does not compare the artwork of firesetters with non-firesetters, only characteristics within firesetting risk levels. The study is delimited by a circumscribed age group. In addition, this study is delimited to the examination of the graphic representation of subjects without a face-to-face interview, which eliminates their description of the meaning of the images. The study therefore does not intend to explore the actual historical or personality factors that caused the firesetting behavior.

This study proved that there were differences in the artwork of latency-aged juvenile firesetters. Intraclass correlations were used to obtain inter-rater reliability. The

results point out that scale # 6 and #11 did not have strong inter-rater reliability. Scale #8 "Problem-solving" was deleted from this study due to the directions of the K-H-T-P (Burns, 1987), which involve no problem solving. Scores from males were higher in both Level One and Three; Females scores were higher in Level Two. The Mean scores of the FEATS showed that there were differences in the artwork between Level One, Two and Three risks as well as differences between boys and girls. However, the differences and correlations were not statistically significant.

This study began the exploration of looking *at* variables in the artwork of juvenile firesetters in order to look *for* those variables in the future. The results of the research may be useful data to fire investigation (and corresponding fields) and to the field of art therapy. Earlier interventions may be utilized if a child completes an art assessment such as the K-H-T-P and a clinician is educated about this study. Others may note the differences seen in the artwork of a child and be able to differentiate which level of firesetting they may fall into. Also, a clinician may be able to detect a firesetting behavior, first seen in the artwork, before the behavior follows it. Intervention may then be required to help alleviate and work through the latent thoughts. Macdonald (1977) included a quote from Sir Walter Raleigh (letter to Sir Robert Cecil) that seems to apply to firesetting: "Prevention is the daughter of intelligence" (p. 227).

CHAPTER II

LITERATURE REVIEW

Theories and Etiologies

"Kids are sending up smoke signals, and it's up to us to get alarmed, and take action now – before more people get hurt, maimed, or killed by kids with matches" (Cool, 1997, p. 135).

Juvenile firesetting has occupied the attention of clinicians and researchers for many years (Lewis & Yarnell, 1951; Kolko, 1985; Kosen & Dvoskin, 1983, Macdonald, 1977; Sakheim & Osborne, 1991). Approaches to juvenile firesetting include exploration of the etiologies, both psychological and neurological (Hamling, 1995; Kazdin & Kolko, 1986; Kolko & Kazdin, 1989, 1990; Lowenstein, 1989; Macdonald, 1977; Milrod & Urion, 1992; Pontius, 1999; Sakheim & Osborn, 1986, Showers & Pickrell, 1987; Whelan, Fonte & Braig, 2001), identification of different levels of severity (Hamling, 1995; Kolko & Kazdin, 1994; Orange County Fire Authority, 1999; Sakheim & Osborn, 1991; Whelan, Fonte & Braig, 2001) and, interventions (Adler, Nunn, Northam, Lebnan, & Ross, 1994; Hamling, 1995; Lowenstein, 1989; Orange County Fire Authority, 1999; Schwartzman, Stambaugh & Kimball, 1998; Whelan, Fonte & Braig, 2001).

Sakheim and Osborne (1991) have done research that helps to delineate risk levels, comparing minor firesetters with severe firesetters. Hamling (1995) uses a "psychodynamic classification system for pathological firesetters with treatment strategies for each subgroup". Kolko & Kazdin (Kazdin & Kolko, 1986; Kolko & Kazdin, 1986) proposed a model of firesetting risk factors and then attempted to devise a means of identifying firesetters, or those at risk of becoming firesetters, on the basis of behavioral factors.

According to a number of writers, there are wide ranges of familial, personality and biological factors that are associated with firesetting in children (Adler, Nunn, Northan, Lebnan, Ross, 1994; Gaynor & Hatcher, 1987; Geller, 1992; Hall, 1998; Hamling, 1995; Kolko & Kazdin, 1986, 1989, 1990; Kolko, Kazdin & Meyer, 1985; Lowenstein, 1989; Macdonald, 1977; Pontius, 1999; Sakheim & Osborne, 1986, 1991; Showers & Pickrell, 1987; Whelan, Fonte & Braig, 2001). More specifically, these factors which were found frequently among firesetters are: severe maternal rejection, anger at the father for his absence, abandonment or abuse, abusive and abnormal family environment, painful and unsolved childhood experiences, negative environmental experiences, serious personality problems, minor neurological and medical problems, oral dependency, revenge fantasies, gaining mastery or control over adults through firesetting, sexual excitement, impulsivity, projection of fire or explosion, and a final diagnosis of conduct disorder (Boberg & Thomas, 2001; Federal Emergency Management Agency/U.S. Fire Administration, 1994; Lownstein, 1989; Osborn & Sakheim, 1986; Whelan, Fonte, & Braig, 2001). Heath et al (1983), as cited in Adler et al., (1994) stood alone in stating that there seems to be little evidence to support claims for an association

with enuresis, cruelty to animals, or sexual problems as suggested in some of the early psychoanalytic literature" (p. 1195).

Some literature on the subject of firesetting addresses the fact that the characteristics related to this problem are generally symptomatic of another disorder. (Adler et al., 1994; Geller, 1992; Kolko & Kazdin, 1990; Lewis & Yarnell, 1951; Orange County Fire Authority, 1999; Whelan, Fonte, & Braig, 2001)

> It is important to always keep in mind that in children, firesetting is only a symptom of the problem, not the problem itself. These symptoms help create the psychological profile of firesetting children. It is important to keep in mind that it is usually not one - but a series of behaviors that are evident. One behavior or factor should not constitute a label of firesetter, but should alert adults to the possible existence of a problem that needs addressing. (Whelan, Fonte, & Braig, 2001, p.14)

The Orange County Fire Authority (1999) shares the same view that in many cases, firesetting is not the problem, but rather a symptom of a more serious underlying problem.

Firesetting and Arson

Arson is the second leading cause of fire death. It is the leading cause of property damage due to fires. Direct property damage from arson totals more than $3 billion in a typical year. Juveniles account for 55% of arson arrests (Federal Emergency Management Agency/U.S. Fire Administration, 1994; Focus Adolescent Services, 2000; Hall, 1998; Schwartzman, Stambaugh, & Kimball, 1998). Arson can be defined as unsupervised

firestarting and pathological firesetting that leads to damage (crime) caused by a fire. In order to be considered arson it must be determined that the juvenile [or adult] involved acted recklessly or intentionally (Gaynor, 2000). The laws vary from state to state. "Arson refers to the act of deliberately setting fire to property of any kind. Firesetting is a broader term as it does not require the act to be intentional" (Geller, 1992, p. 624).

Firesetting for profit, firesetting to cover a crime, and playing with matches are included as instances of latency-period firesetting because of the uncaring, thoughtless, or irresponsible nature of the acts. Fire may also be used as a way to threaten or intimidate others (Boberg & Thomas, 2001; Hall, 1995; Hamling, 1995). Firesetting for profit includes setting fires to collect insurance and part-time firefighters setting fires increase their wages (Hall, 1998; Hamling, 1995).

Etiologies

Historical, Developmental and Familial Determinants in Firesetters.

There are several research studies that relate firesetting to measurable neurological responses. Pontius (1999) approached firesetting by studying the neurological factors. She performed research on the occurrence of limbic seizures and how they are related to firesetting. Milrod and Urion (1992), reported on three boys with firesetting photoparoxysmal responses to intermittent photic stimulation, and temporal lobe electroencephalographic abnormalities. Self-induced seizures using a light source were well described in patients with photosensitive epilepsy (PSE). They found that firesetting resolved and behavior improved with administration of anticonvulsants. This report

supports and extends the 'newly' recognized association between firesetting, seizures, and certain electroencephalographic (EEG) abnormalities.

Development and Performance.

A summary of the development of humans (the stages prior to and during latency) will be briefly explored in order to gain better insight to the latency-aged firesetter. There seems to be evidence that points to the core pathology and psychosocial crises from stages beginning in infancy that had been arrested in the firesetters' development (Hamling, 1995; Lowenstein, 1989; Sakheim & Osborn, 1986, 1991; Whelan, Fonte & Braig, 2001). Beginning in the first stage, infancy (first 24 months), there are tasks such as: the development of sensory/perceptual and motor functions, attachment, sensorimotor intelligence and early causal schemes, understanding the nature of objects and creating categories and emotional development (Newman & Newman, 1999, p. 137). The infant's psychosocial crisis at this time is trust versus mistrust. The roles of the parents are extremely important in this stage because the infant is dependent upon them for physical safety and a fostering of emotional and cognitive development. Hope and withdrawal are respectively the prime adaptive ego quality and core pathology (Newman & Newman, 1999).

The next stage, toddlerhood (ages 2 and 3) addresses the following developmental tasks: elaboration of locomotion, fantasy play, language development, and self-control. The psychosocial crisis in toddlerhood is autonomy versus shame and doubt. The prime adaptive ego quality is 'will' and the core pathology is compulsion (Newman &

Newman, 1999). Fire behavior naturally emerges in most children around the age of three (Gaynor, 2000).

Early school age (4 to 6) is the stage where the child begins group play and self-theory. Self-theory can be defined as an organized set of ideas about the self, the world, and the meaning of interactions between the self and the environment (Newman & Newman, 1999, p. 558). There is now gender identification and early moral development within the child. The psychosocial crisis at this stage is initiative versus guilt. The central process of the early school aged child is identification. Children going through this stage have the prime adaptive ego quality of purpose and the core pathology leads to inhibition (Newman & Newman, 1999).

In middle childhood (6 to 12) the developmental tasks are: friendship, concrete operations, skill learning, self-evaluation, and team play. Middle childhood is the time when parent-child relationships, peer friendships, and participation in meaningful interpersonal communication provide children with the social skills they will need if they are to cope with the upcoming challenges of adolescence. "Children's cognitive accomplishments appear to develop in conjunction with their achievements in the social and emotional domains" (Newman & Newman, 1999, p. 264). Industry versus inferiority is the psychosocial crisis at this stage. Education is the central process and competence is the prime adaptive ego quality. The core pathology points to inertia, which can be found in the children who are withdrawn and passive, never engaging psychologically with the demands of their schools or their communities (Newman & Newman, 1999, p. 297).

Freud calls it the latency stage because "violent drives are normally dormant" (Erikson, 1963, p. 260). According to Newman and Newman (1999), children in the latency period (6-12 years old), experience new thrills and excitement, generated by the capacity to engage in more complex forms of play and the desire to take new risks. This is the period in which cognitive and social skills develop and are crucial to later life stages. Freud stated, "This stage differs from the earlier ones in that it is not a swing from an inner upheaval to a new mastery"(Erikson, 1963, p. 260).

> The events of this stage play an extremely important part in the psychology of the person. Violence in the neighborhood, media, and school strengthen impulsive, reactive responses and make it increasingly difficult for children to draw upon their higher order reasoning skills to reinterpret or interrupt their sense of anger and threat. Access to weapons, especially guns, leads to new heights of destructive expression for these children. (Newman & Newman, 1999, p. 301)

According to Macdonald (1977), some children start setting fires around the age of six, and one third of all persons arrested for arson in the US are under fifteen years old. Pickrell & Showers (1987) conducted a study, which showed that non-firesetters were significantly more likely than firesetters to have achieved age-appropriate levels of physical, social, and emotional development. No differences were found between firesetters and controls (non-firesetters) in cognitive development or in school-related variables. However, firesetters and controls, non-firesetters, age 13 and older were more likely than their younger counterparts to have had poor academic performance, failed a grade, and been truant from school.

Hamling (1995) stated that latency-period delinquents' activities are often acts of projected anger arising out of frustration or low self-esteem and are primarily attention-seeking devices or cries-for-help. Hamling (1995) further stated that, "In this respect they are different from the target-specific acts of anger of the anal stage."

Firesetters tend to have poor social skills and greater learning difficulties, but do not have a lower intelligence (Geller, 1992). Whelan, Fonte, and Braig (2001) also note that firesetting is a symptom of the above problems; however, they seem to feel that poor social skills and learning difficulties result in below average school performance. Firesetters are diagnosed most frequently as having a conduct disorder, attention deficit disorder, or adjustment disorder (Geller, 1992; Kolko, Kazdin & Meyer, 1985; Stewert & Culver, 1982).

Kolko and Kazdin (1994) conducted a research study that involved 95 children ages 6-13 years old who acknowledged having burned property or set a fire in the past year and who were drawn from a larger sample of firesetting children. This study was conducted in order to gather missing information regarding the characteristics of firesetting incidents as well as examine the relationship of reported characteristics to psychopathology and firesetting history. In the study, it was reported, using Pearson Correlations, that older age was associated with seeking out materials, setting the fire out of the house, having a motive of anger or revenge, feeling neutral or positive after the fire, and indicating the likelihood of setting another fire. Kolko and Kazdin (1994) also found that the percentage of children who indicated they would set another fire was only slightly more than 10 % (p. 120).

In concluding the developmental stages of the latency-aged firesetter, arrests in their development may begin in any of the stages, beginning in infancy. For example, in the infant's psychosocial crisis (trust versus mistrust) there is a chance for a positive and negative resolution. According to Newman & Newman (1999), at each consecutive stage, the likelihood of "a negative resolution increases as the developmental tasks become more complex and the chances of encountering societal barriers to development rise" (p.44).

Family Dynamics.

Research on the characteristics of children who set fires has suggested that they exhibit higher levels of behavioral and psychological dysfunction, especially antisocial behavior, than their nonfiresetting peers (Kolko, 1989; Kolko & Kazdin, 1986). Examination of this clinical picture has broadened to include parent and family correlates of firesetting. Kolko & Kazdin (1990) acknowledged that parental psychological problems have been more frequently described among case or descriptive studies of psychologically disturbed firesetters. "The specific forms of dysfunction have been diverse, including schizophrenic or psychotic disorders, depression and antisocial behavior" (Kolko & Kazdin, 1990, p. 229). Parents of firesetters acknowledged greater personal and marital distress, parenting difficulties, and family dysfunction. Additionally, it was noted that also that there tends to be an absence of the father (Federal Emergency Management Agency/U.S. Fire Administration, 1994, 2000; Geller, 1992; Kazdin & Kolko, 1986; Kolko & Kazdin, 1986,1990; Lowenstein, 1989; Osborne & Sakheim, 1986; Saunders & Awad, 1991; Showers & Pickrell, 1987; Whelan, Fonte, & Braig,

2001). Saunders and Awad (1991) added that the more problems the family has, the greater the likelihood of recidivism.

> In terms of perceived parenting functions, parents of firesetters report less acceptance of their children and less child centeredness than parents of no fire [never set fire] children.... Parents of firesetters also report less monitoring and discipline of their children and a lower level of family affiliation.... Greater marital discord was evident among parents of firesetters.... Isolation from parents or lengthy parental absences has also been implicated in firesetting.... Family disruptions experienced by firesetters are due to the experience of greater disturbances in individual psychopathology, parent-child relationships, and specific family management practices by parents in the home....Firesetters' parents were perceived as being more lax in their use of discipline, prone to instilling anxiety, and less likely to enforce consequences than parents of no fire children. (Kolko & Kazdin, 1990, p. 236)

Among the juveniles screened by three separate programs, the younger juvenile firesetters were more likely to have acted alone, less likely to live in a two-parent household, more likely to have a parent who smokes, and more likely to have set a fire indoors or at their own residence (FEMA/U.S. Fire Administration, 1994).

Jayaprakash, Jung and Panitch's (1984) study between firesetters and nonfiresetters in a hospital setting revealed that firesetting, as one type of "acting out" behavior, may be more environmentally than psychodynamically determined. "The choice of this particular symptom may have its roots in the parent/child relationship and the attitude of parents toward fire and the use of matches" (p. 77). It was also added by

Jayaprakash, Jung and Panitch (1984) that an exploration of parental attitudes toward fire, and family history related to firesetting behaviors might uncover a social learning basis for the adoption of this particular symptom. This knowledge might be helpful in identifying potential firesetters and providing preventive services for them.

Abuse.

A history of abuse has been found to link with firesetters and firesetting behaviors (Lowenstein, 1989; Whelan, Fonte, & Braig, 2001). Firesetters' families show consistent patterns of disruption including a greater history of abuse and neglect (Geller, 1992; Sakheim & Osborn, 1991; Showers & Pickrell, 1987). In a comparison study (Sakheim & Osborn, 1986) between firesetters and non-firesetters, it was noted that abandonment or abuse were found more frequently among firesetters.

Jayaprakash, Jung and Panitch (1984) studied hospitalized children who set fires and other hospitalized children (non-firesetters). They found that the only discriminating variable was the high incidence of physical abuse among the firesetter group. Lowenstein (1989) cited that painful and unresolved childhood experiences of a highly abusive home environment were found in juvenile firesetters. Kolko and Kazdin (1990) add that there is a relationship between child firesetters and family instability, "including excessively harsh disciplinary practices, most notably physical abuse, and relationships characterized as unaffectionate, negative, and conflictual" (p. 229). As stated by Hamling (1995), "The background of anal-stage firesetters is likely to include parental neglect between the ages of 18 months and 3 years" (p. 4).

Sakheim and Osborn's (1986) data indicated that the child whose family background includes severe maternal rejection resulting in the child's feeling unloved, unwanted, or emotionally deprived, or a child who has suffered paternal abuse, abandonment, or death is likely to develop intense anger and resentment of parental figures, and, by displacement, against adults in general.

> These feelings of being an unwanted, unloved, "throw-away child" whose dependency needs were never adequately met, or of being abused without having any recourse, are painful indeed, and often generate elaborate sadistic, spiteful, and retaliatory fantasies that may be projected on the...House-Tree-Person. (Sakheim & Osborn, 1986, p. 497)

Predisposition to Firesetting

Gender.

Macdonald (1977) and O'Sullivan and Kelleher (1987) note that the literature of the nineteenth century, particularly European studies, indicated that arson was usually a crime committed by females. Currently however, it seems predominately a male problem. Showers and Pickrell (1987) state that distinct differences existed between males and females. The overall results in their study support the belief that firesetting is more prevalent among males than females. Supporting this belief, Kolko and Kazdin's (1994) study stated that boys reported they were less likely than were girls to plan their fires, and patients were more likely than nonpatients to say that nothing would stop them from setting another fire (p. 120). Adler et al. (1994) further reported, "There is a universal agreement that firesetting is a problem predominantly affecting boys" (p. 1195).

Female firesetters seem to be rare (Federal Emergency Management Agency/U.S. Fire Administration, 1994; Geller, 1992; Kolko, Kazdin, & Meyer, 1985; Lewis & Yarnell, 1951; O'Sullivan & Kelleher, 1987; Saunders & Awad, 1991; Whelan, Fonte, & Braig, 2001). "Urethral eroticism, homosexual fantasies, and sexual arousal were used by Freud (1932) and other early workers to explain the overrepresentation of males among firesetters. Subsequent research has failed to produce evidence to support this hypothesis" (Adler, Nunn, Northam, Lebnan, & Ross, 1994, p. 1201). O'Sullivan and Kelleher (1987) stated, "The supposed association with childhood enuresis played a large part in the formation of this hypothesis" (p. 818). They believe that when firesetting arises in females, it is due to severe psychopathology such as a psychotic or depressive illness.

A database of records dating from 1984 to 2001, in the Camden County Fire Marshal's Office, 86% of males and 14% of females out of those interviewed are firesetters or display firesetting behaviors. Hall (2000) reported "The CPSC [Consumer Product Safety Commission] special study found boys playing with lighters outnumbered girls by more than four to one. Among fatal victims of those fires, however, boys outnumber girls by less than two to one. This suggests that girls are often killed by fires started by their male siblings or playmates" (p. 26).

Psychodynamics, Symptoms of Firesetting and Fire Risk Levels.

Children set fires for a number of reasons. According to the Orange County Fire Authority (1999), it is common for young children, under the age of eight, to show interest in fire and fireplay. These children require age appropriate education and must understand the destructive nature of fire. The Orange County Fire Authority also stated

that simple curiosity is the number one cause of juvenile firesetting and fireplay. Meri-K Appy, the N.F.P.A.'s (National Fire Protection Association) vice president for public education, interviewed and reported by Cool (1997) stated, "What many parents don't realize is that fire-setting is a progressive behavior, so if you don't deal with curiosity fire-setting it gets to be crisis fire-setting, and then turns into delinquent fire-setting as the child gets older" (p. 34). There is a progression that moves from curiosity/accidental, to fireplay, to firesetting, to arson (Whelan, Fonte, & Braig, 2001, p. 12). During Level One, there is curiosity/experimentation where the child plays with toy fire trucks and cooks food on their toy stoves. Level One can be described as little concern for future acting out behaviors with fire interest. A Level Two firesetter is always symptomatic and can be described as having definite concern for future acting out behaviors where firestarting takes place. This child experiments with ignition sources such as matches and lighters. There are no typical targets for these fires and the child makes attempts to get the fire out. Level Three can be defined as a severe psychiatric/emotional problem that carries an extreme concern for future acting out behaviors. Firesetting is intentional and planned in Level Three firesetters (Gaynor, 2000; Whelan, Fonte, & Braig, 2001). In level two and three fires, abuse sometimes occurred within the prior 24-48 hours (A. Braig (Camden County Deputy Fire Marshal), personal communication, April 13, 2001).

Geller (1992) believes it is associated with medical, neurologic and/or mental disorders. Lowenstein (1989) states other reasons for firesetting such as, excitement caused by fires, enjoyment produced by fires; relief of frustration by fire-setting, and expressing anger through the process of firesetting (p. 189). The Orange County Fire Authority (1999) report states that children also set fires in response to a crisis in their

lives. "Unable to express anger, sadness or rejection, they sometimes turn to firesetting" (p. 2). Suicidal, delusional motives and self-immolation may also be seen as motives for firesetting (Geller, 1992). Most research points to firesetting behavior as a symptom of a conduct disorder/antisocial personality disorder.

Firesetting can be put into stages: oral, anal, and phallic. In the oral-stage, "children set fires to force a move to a new residence, trying to burn down the family home, setting fire to oneself (Geller, 1987), and feeling impelled to set fires by an irresistible impulse (Macdonald, 1977; Nurcombe, 1964)" (Hamling, 1995). "Anal-stage firesetters strike out as a reaction to their emotions and the attack will be aimed at the property of particular people" (Hamling, 1995). They may act out because of revenge, hatred, anger (Fine & Louie, 1979; Gaynor, 2000; Geller, 1992; Macdonald, 1977), and jealousy (Macdonald, 1977; Nurcombe, 1964). According to Wax and Hall's study, cited in Hamling (1995), "Phallic-stage firesetters are identified by the strong feelings of elation they experience from watching fires, from watching firefighters at work, from urinating on fires" (p. 4).

Assessments of Firesettng.

O'Sullivan and Kelleher (1987) stress the importance of assessments. There are methods for classifying a child's risk for firesetting (Federal Emergency Management Agency, 1979, 1983). These classifications include learning experiences and cues, personal, cognitive, behavioral, and motivational repertoires, as well as parent and family influences (Kolko & Kazdin, 1989, p. 159). O'Sullivan & Kelleher, (1987), stressed that the importance of adequate assessment and management is born out by the potentially

serious consequences of many incendiary acts and also by the high rates of arson recidivism. The value of assessments are their potential to identify recidivist firesetters, to delineate subtypes of firesetters and to suggest therapeutic directions. Assessments are used to guide in prediction, classification, prognosis, prevention, and treatment. Cox-Jones, et al. (1990) and Kolko & Ammerman (1988) were cited in Kolko & Kazdin (1994) as stating that in some cases, a comprehensive assessment of firesetting has contributed to the development of effective multi-modal interventions (p. 122).

Listed below are a few assessments commonly used by fire prevention programs across the United States:

**Children's Firesetting Interview (CFI)*: 86-items--designed to evaluate several dimensions believed to be associated with firesetting, based on clinical and empirical literature, and to encompass domains of functioning in which child self-report is likely to be critical. The CFI is a semi-structured interview designed to elicit information from the child regarding several dimensions, which may help to better describe and predict firesetting behavior. There are two types of formats: multiple-choice questions and fill-in questions (Kolko & Kazdin, 1989). D.J. Kolko sent a revised version (10/96) of the CFI to this researcher via email on 8/23/2001.

**Firesetting History Screen (FHS)*: administered to parents and children to document the children's involvement in an incident of burning (e.g., paper, property) or firesetting. It evaluates the presence and frequency of matchplay and firesetting, severity of firesetting, and interest in fire for two periods: the current year (past 12 months) and the past (longer than 12 months ago). The same questions were administered at 1-year follow-up (Kolko & Kazdin, 1992, 1994).

*_Fire Incident Analysis for Children (FIAC)_: examines 21 characteristics of the children's most serious incident of burning or firesetting within the past 12 months (e.g., situational content, precipitants, motives, consequences). The purpose is to identify characteristics of children's firesetting incidents and examine the relationship of reported characteristics to psychopathology and firesetting history (Kolko & Kazdin, 1994).

*_Firesetting Risk Interview (FRI)_: consists of 15 a priori dimensions—86 items; a parent-report assessment instrument designed to evaluate several personal, familial, and social dimensions related to the model of firesetting risk. The goal is to sample specific content areas from the conceptual model of firesetting risk. Kolko & Kazdin (1989) studied 343 children (ages 6-13) and parents that were drawn from samples of nonpatients, outpatients, and inpatients. In accord with the FRI, firesetters and nonfiresetters were found to differ in their curiosity about fire, recent involvement in fire-related activities, expression of negative emotions, early experiences with fire, exposure to others' involvement with fire, and parents' use of general disciplinary consequences. Kolko and Kazdin noted that the addition of variables from other components of the model that are not evaluated in the FRI dimensions would be likely to enhance classification and overall prediction of firesetting. "The FRI demonstrated internal consistency and test-retest reliability, and yielded dimensions that correlated in the low to moderate range. These findings in regard to the scale suggest that the measure can reliably assess aspects of the model" (Kolko & Kazdin, 1989, p. 171).

*_Child FireRisk Evaluation Form_: A dynamic-behavioral model which suggests that past history of dysfunctional behavior in conjunction with poor supervision and training in fire safety generates an at risk child. The assessment is set up to allow the

evaluator to more clearly understand the sequence of thoughts, feelings and behavior that lead to and maintain firesetting. The form is divided into eight content sections plus demographics (i.e.- school, peer issues, behavior issues, family issues, crisis or trauma, fire history, characteristics of firestart or fireplay, observations). The scores received are: C(child)-1, 2 or 3 and P(parent)-1, 2, or 3. Whelan, Fonte, and Braig (2001) note that positioning a C or P in column 3 suggests extreme risk (due either to the child's focus on fire, the likelihood of emotional or behavioral dysfunction, or both). They further stated that a C-1 or P-1 indicates that the child or parent is engaging in a behavior that is quite normal or a behavior that is indicative of curiosity firesetting and is not correlated with recidivistic firesetting (Fineman, 1997; Whelan, Fonte, & Braig, 2001).

**Family FireRisk Evaluation Form*: This interview form is divided into nine content sections in addition to demographics. Similar to the Child FireRisk Evaluation Form with the addition of a lengthier background section, health history section as well as family structure/issues section. The goal is to sample specific content areas from the conceptual model of firesetting risk (Fineman, 1997; Whelan, Fonte, & Braig, 2001).

**Parent Questionnaire*: Eight sections (school issues, health/development issues, peer issues, antisocial behavior, symptoms of anxiety or depression, fire history, family issues, severe dysfunction) that are to be checked off as: "rarely to never," "sometimes," and "frequently" (Fineman, 1997; Whelan, Fonte, & Braig, 2001).

**Kinetic House-Tree-Person Drawing (K-H-T-P)*: This assessment was used for characterizing the artwork of latency-age child firesetters (Burns, 1987; Osborne & Sakheim, 1986; Whelan, Fonte, & Braig, 2001).

Interventions

Fire-Related.

"Given the rather extensive amount written about child and adult firesetters, the dearth of material on the subject of treatment is surprising. This reflects, in part, how difficult a problem the treatment of firesetters poses for mental health professionals" (Geller, 1992, p. 636). There seem to be dilemmas as to the trials involving children with highly lethal behaviors and evaluating a low-frequency event. Many facilities do not want to deal with a firesetter. Sullivan and Laughlin (2002) reported, "The criminal justice system is ill-equipped to deal with fire-setters, experts say, and finding treatment centers willing and capable of dealing with such patients is difficult"(p. 10-A). Hennessy as cited in Cool (1997) speaks directly to this problem. "He [a 13-year-old linked to 20 fires] was sent to juvenile hall, but they released him the same day. When we saw him out on the street we thought he'd escaped, but it turned out they didn't want a fire-setter in the center, so they cut him loose. That was a few years ago, and things aren't a lot better now" (p. 135). Braig as cited in Cool (1997), further adds:

> Nor do psychiatric facilities, group homes, or foster parents want a torch in their building. Not only are there no residential facilities in America that specialize in fire-setters, but only a handful of in-patient programs of any kind will accept them at all. Even fewer know how to treat a fire-setter correctly, because most [institutions] give the same treatment they would a sex offender, on the notion that if you've seen one deviant, you've seen them all. There are similarities in these problems – but also some key differences that aren't being addressed. (p. 135)

Regardless of which agencies implement their selected methods of evaluation, they all share the common goal of producing a plan for the remediation and treatment of juvenile firesetters (FEMA/USFA, 1994, p. 31). The FEMA programs are often run in conjunctions with child and adolescent mental health services (Adler et al., 1994). There are five basic factors that should be contained in an intervention plan, according to FEMA/USFA (1994). The first factor is a comprehensive description of the problem and the contributing psychosocial features. The second factor is the assessment. The third factor is specific recommendations for intervention. The fourth factor is the presentation of the intervention plan to juveniles and their families. The final factor of the implementation plan is insuring follow-through by firesetters and their families (FEMA/USFA, 1994, pp.31-32). According to Macdonald (1977), treatment of the child may have to be combined with treatment of the parents. Interventions seem to fall into two categories, those that occur within the purview of fire departments and those that occur within the mental health settings (FEMA/USFA, 1994).

The Juvenile Fire Awareness and Intervention Program was established to develop and evaluate an intervention to be offered by fire fighters for children who set fires. There was no evidence to suggest that the multi-component program offered by trained fire fighters is effective in reducing firesetting. There was however, a significant decrease in the frequency and severity of firesetting across all groups. The reduction in firesetting suggests that fire safety education by the fire fighters is the most appropriate approach to this serious community problem (Adler et al., 1994).

The Phoenix Fire Department's Youth Firesetter Intervention Program Parent Guide (Boberg & Thomas, 2001) contains information about the subject of fire, what to

do about youth firesetting, the youth firesetter program, stages of child development, ADD/ADHD and firesetting, parenting tips, laws, tips for home fire safety (including home escape plans), and resources for parents. The program, which is free of charge to all attendees, contains an educational component, taught by fire personnel, for several age categories. The goal of the class is to stop youth-set fires. This is accomplished through the discussion of the consequences of firesetting, reasons why children set fires, how firesetting impacts the community, and key fire safety behaviors. While the child attends the class, parents or caregivers attend a separate group facilitated by a mental health professional. The goal of the group is awareness to the issues and consequences surrounding youth firesetting, to provide parenting tips, and to provide fire safety education. A team of mental health providers presents a behavioral health component (at the master's level or above). Diversion and community components also play a critical role in the program.

FireWatch is a juvenile firesetter education and intervention program that has been in existence in New Jersey since 1984. It is similar to that of the Phoenix Fire Department's Youth Firesetter Intervention Program in the education and referral components. However, FireWatch also utilizes a "Companion Program," similar to that of a "big sister/brother." This person acts as a positive role model who is a specially trained firefighter. "Through this type of interaction, the juvenile learns that the firefighter is 'a real person' and a friend who could be injured when responding to a fire set by a juvenile" (Whelan, Fonte & Braig, 2001, p. 55).

Hall (2000), among many others in the field, adds that education is an important approach in reducing this large and growing problem. Some of Hall's recommendations

are: preschool fire safety education, education for caregivers of preschoolers, and child-resistant matches and lighters. Hall states, "Family members must be encouraged to supervise children and to keep dangerous fireplay articles out of their reach and sight. Smokers must remain conscious of children in the home" (p. 27). Interventions directed towards product safety include the above-mentioned child-resistant matches and lighters as well as labels on matches and lighters themselves (not just the wrappers or packages which can be discarded).

Orange County Fire Authority (1999) offers their suggestions to the "burning problem" that exists today. Orange County has designed a reactive program (Orange County Fire F.R.I.E.N.D.S.- *Firesetter Regional Intervention Education Network and Delivery System*, coming into play only after a firesetting event has taken place. This program came into existence because the local fire fighters felt a responsibility to assist families with firesetting problems, but did not have a good baseline understanding of the magnitude of the problem or how to address it.

Firefighters are not trained as behavioral health care specialists, but they can be trained to recognize when a child's motivation for firesetting may be due to some underlying cause that basic fire safety education cannot properly address. These fire fighters can deliver the fire safety education using basic lesson plans and forms, and make appropriate referrals for further intervention, allowing professionals with expertise in those areas to adequately assess and intervene with the child and family.

Federal Emergency Management Agency/United States Fire Administration (1994) report that most importantly, juvenile courts along with the fire service and other community agencies need to prioritize firesetting cases. "The community's intervention

should be swift and decisive with consistent, predictable consequences. Juvenile firesetter intervention programs need to be supported or enhanced so that detection and assessment takes place quickly. Early detection and intervention improves the likelihood of preventing future firesetting" (FEMA/USFA, 1994, p. 28). Braig, as stated in Sullivan and Laughlin (2002), adds that the earlier you can catch the child in the behavior, the higher the success rate. Compulsive firesetters get their start as juveniles. Unless they are successfully treated, they keep on setting fires as adults (p. 1A).

Dr. Mariann Pokalo, a licensed psychologist and expert on firesetters stated, "Treatment facilities are less likely to admit a child or adult with a history of fire-setting because of the simple risk that they could set the place on fire. People just don't want them around." Dr. Pokalo also stated that intensive therapy treatment centers for firesetters are non-existent (as cited in Sullivan & Laughlin, 2002, p. 11A).

As stated by Macdonald (1977), "All persons charged with arson should undergo psychiatric examination" (p. 242). It was noted that it may be necessary to admit the patient to the hospital for prolonged observation. The aims of the examination should be to determine the clinical diagnosis, the psychological origins of the criminal behavior, and the prospects of treatment. The court will also require an opinion on the question of criminal responsibility. Macdonald (1977) also stated that firesetting in children and adolescents is often a self-limiting problem, resulting as it does from the stresses of puberty and adolescence. This is not always true, and examination may reveal findings, which point to a more gloomy outlook. In which case, family therapy may be necessary (p. 242). One of Macdonald's (1977) recommendations to the field is, "An excellent adjustment in an institution should not be used as a criterion for release. Recidivism is a

feature of pyromania, and release from a prison or hospital should not be lightly advised" (p. 243).

Kolko and Kazdin (1994) noted, "The absence of corrective consequences or disciplinary actions may increase the potential for continued firesetting and the likelihood of damages or injuries. It may be important, then, to administer swift, albeit minor, corrective consequences that integrate educational or skills training opportunities to discourage fireplay" (p. 120).

The success of an approach using a specific treatment program for each type of firesetting will depend on early detection and speedy intervention (Hamling, 1995). Hamling (1995) reported on each type (stage) of firesetter, beginning with the treatment of the oral-stage firesetter. In order to overcome an oral-stage fixation, attempts must be made to restore or establish a positive relationship with the primary care giver (i.e.- helping mother with her nurturing skills or taking steps to place the child in a more caring environment). If there are psychotic symptoms, incorporating drug therapy may be an additional option (Hamling, 1995, p. 6).

Treatments for anal-stage firesetters consist of the graphing technique, plotting a graph of emotional states versus behaviors. The object is to get the individual to recognize his/her emotional state and to substitute a socially acceptable behavior for the more usual destructive one of setting a fire (Hamling, 1995, p. 7). Other techniques used were role-playing, modeling, and rehearsal as a means of giving their subject an acceptable alternative to firesetting when he found himself in a stressful situation. Role-playing may be used as a means of teaching acceptable ways of expressing anger.

Lessons in fire safety from the fire service to reinforce the change in behavior may also be helpful. Parents may need help with their parenting skills and be made aware the importance of the role of a father or father substitute (Hamling, 1995).

Lande, as cited in Hamling (1995), combined orgasmic reconditioning, to increase the level of sexual arousal to heterosexual stimuli, and covert sensitization, to decrease the level of sexual arousal to fire stimuli in the treatment of the phallic-stage firesetter. The change in arousal was still effective at a 9-month follow-up. Another study administered an antiandrogen drug, cyproterone acetate, to reduce the overall levels of sexual arousal. There was a controversial option, castration, which was considered in the past, but is currently being restricted for legal and ethical grounds (Hamling, 1995, p. 8).

A successful treatment for latency-period firesetters was some type of behavior modification program. Three studies cited in Hamling (1995) reported their success with this approach, each eliminating their subject's firesetting behavior within 7 weeks (p. 8). Those firesetters who seem to live a delinquent lifestyle were likely to benefit from placement in a big-brother program where they would be able to establish a strong relationship with a father substitute. Such a program would assist the child in developing his/her self-control mechanisms (Hamling, 1995, p. 8).

Kolko and Kazdin (1994) point out the need for psychosocial interventions that seek to reduce the likelihood of recidivism. FEMA programs are usually multi-component interventions which include fire safety education by trained fire firefighters, sometimes combined with behavior modification consisting of repetitive firesetting under supervision in an attempt to satiate the wish to light fires. Negative consequences for

relapses are used to reinforce the importance of fire-safe behavior. Bumpass, E.R., Fagelman, F.D., and Brix, R.J. (1983) described a technique of 'graphing' to make children more aware of the affective state that precedes their firesetting. Bumpass et al. (1983) hypothesized that the concrete visual representation of these factors assist in observing ego to correlate the cause-effect relationships between feelings and behaviors. This awareness gives a choice of adaptive responses other than setting fires. After the firesetting behavior is interrupted, therapy reverts to a more traditional approach relating to the specific psychopathology of the individual child (Bumpass et al., 1983). "Unfortunately, none of these programs have been subject to systematic evaluation" (Adler et al., 1994, p. 1195). Adler et al. (1994) added that the graphing is no longer used routinely because there is a lack of evidence for any specific benefit of this labor-intensive and complex procedure. The technique was reported to be difficult to administer in a standardized fashion, especially with younger children.

Lowenstein (1989) reported numerous studies that focused on various treatment approaches. These treatment approaches focus on helping the patient to become aware of the consequences of firesetting with success in altering both the target and collateral behaviors; developing interpersonal relationships and reality therapy; involvement of parents in treatment; satiation procedures (while in a residential setting); and confrontation therapy. The treatment of firesetters varies since the causes are complex and often related to unresolved and traumatic childhood experiences in the context of negligent or physically abusive parenting. Accordingly, firesetters often lack socialization and are hostile to treatment (Lowenstein, 1989, p. 192). The most favorable mental health treatment plan is a therapeutic residential setting with constant observation, therapy and

reinforcement procedures. It seems as though the other alternative to treatment is incarceration without treatment, making the prognosis poor.

Art Therapy

Theory on Assessments.

The rationale for exploring an art therapy assessment to identify the personality characteristics and the risk factors in juvenile firesetters is based in the assumption that images reflect the unconscious thought process (Lusebrink, 1990; Oster & Gould, 1987). Wadeson (1980) explains, "We think in images. We thought in images before we had words.... In addition to imagery forming a base of experience in personality development, it is also recognized as a primary component of unconscious phenomena" (p. 8). Lusebrink (1990) also articulates this theory:

> The most obvious difference [between art therapy and the use of verbal imagery in therapy] is the use of art media to express internal images, feelings, thoughts, and sensations in a concrete form and the visual feedback of these products. The visual expressions produce a tangible, permanent record of the image that does not undergo changes and/or distractions through later recall from memory.... Visual expression facilitates the dialogue between inner and outer reality, whereby the media can be used as symbolic agents. (p. 10)

Humans developed pictorial symbols before the development of phonetic language; therefore drawings can be considered as the source for basic communication (Lusebrink, 1990; Oster & Gould, 1987). It was also theorized that art can be a language of cognition paralleling words, that cognitive skills can be evident in visual as well as

verbal conventions, and that these skills, traditionally identified and assessed through words, can also be identified and assessed through drawings (Silver, 1996).

Lowenfeld and Brittain (1987) add, "A child expresses thoughts, feelings, interests, and knowledge of the environment in creative expressions" (p. 7). Hammer (1980) wrote of the advantages of projective drawings. Some of these advantages are: (a) They are relatively simple to administer; (b) total response time is comparatively short thus affording rich returns in terms of time and energy expended; (c) they can, therefore, serve as a quick screening device; (d) they afford a minimally-threatening, maximally-absorbing introduction to the test battery; a non-verbal projective technique has obvious advantages with young children, the poorly educated, the mentally defective, the non-English-speaking, the painfully shy, and those of concrete orientation;... (g) drawings more frequently get under the defenses of evasive and guarded subjects; organicity is readily detected; ...(i) empirical evidence is beginning to suggest that drawings may constitute a clinical instrument which descends to the more primitive and deeper layers of personality.... (p. 610)

Data from Art Therapy Assessments.

"Where direct verbal communication is minimal and insight-limited, procedures are needed to provide the clinician with a constructive means to enhance the understanding of underlying conflicts" (Oster & Gould, 1987, p. 9).

Mohr's early papers in 1906 (as cited in Gantt, 2000) delineated how "collecting both spontaneous and directed drawing from patients helped in making a diagnosis. Mohr's work became the precursor of both modern projective drawings and art therapy

assessments. By the late 1970s and 1980s creative arts therapists developed a number of assessment procedures" (p. 41).

Art therapy assessments are usually the initial screening tool used by art therapists. Hammer (1980) cited Sir John Lubbock who stated, "What we see depends mainly on what we look for. And we choose that House, Tree or Person to draw for which we have a certain affinity or, at times, identification" (p. 170). Gantt's (2000) remark is similar, "One should not have a preconceived notion of what might be found but should have some concept of what to look for" (p. 43). Rubin (1984) stated, "Formal aspects of art products (line, organization, etc.) may offer important clues to the state of the child's cognitive apparatus; indeed they are the most dependable index of developmental level, far more useful than content" (p. 69). "Looking at formal aspects of children's art tells us not so much what is being said as how it is being conveyed" (Rubin, 1984, p. 70). Rubin also adds that often the purpose of assessment is "very pragmatic and practical...to set goals for work with individuals" (p. 279). Wadeson (1980) believes that the use of artwork generally stimulates the expression of symbols.

Silver (1996) stated, "Drawings have been used to assess intelligence for over 50 years" (p. 9). One of the earliest assessments to test cognition included in Silver's (1996) manual was *The Bender Visual-Motor Gestalt Test* (dated 1938), which measures visual-motor perception and emotional disturbance by asking examinees to copy abstract designs. Koppitz's (1968), *The Human Figure Drawing Test* (as cited in Silver, 1996), scored for level of intellectual development as well as emotional indicators (p. 9).

Michaux, in her unpublished master thesis says:

By utilizing the art therapy techniques as a means of evaluating children

who set fires, images are naturally elicited through the evaluation process. Once the images are graphically manifested in the child's artwork, their symbolic meaning may then be interpreted in order to ascertain the source of conflict. (Michaux, 1987, p. 70)

In speaking about investigating disorders, Linesch (1988) states that there are two levels: "first in terms of how adolescents' (behavioral) symptomatic manifestations are displayed in their art productions; and second, in terms of how the latent (unconscious) dynamics responsible for the symptoms also become evident in the creative expressions" (p. 25).

Art Therapy Treatment.

Treatment may not begin until a thorough assessment is completed. Beginning treatment relies on what occurred in the initial assessment. Art therapy, using the family treatment model, was an intervention and therapeutic model suggested by Schaefer and Millman (as cited in Geller, 1992) for the child firesetter. They suggested a multimodal, comprehensive plan for child firesetters that includes a visual tool for expression, art therapy.

Art therapy may be a successful tool with child firesetters dealing with aggression, coping skills, communication and self-esteem, among other problem areas. Art therapy promotes appropriate expression of anger (Rubin, 1978; Wadeson, 1980). The process of making art has been known to improve coping strategies and encourages the development of skill and control (Lowenfeld & Brittain, 1987; Walsh 1990). Often, children have difficulties in communicating what they are feeling inside; they cannot

express what they are experiencing. Art is a form of therapy that requires no verbal skills, although most who have used it improve in their communication skills (Landgarten, 1981; Linesch, 1988; Naumburg, 1966; Rubin, 1978; Wadeson, 1980). Art is a way to gain distance from the self. The therapist or client may be able to talk through the artwork. It also increases self-esteem and promotes ego development (Linesch, 1988; Naumburg, 1966). "The use of visual means to express affect and psychological states has several powerful attributes that lend themselves effectively to the therapy process" (Linesch, 1988, p. iv). Linesch (1988) believes that with an increased self-esteem, art therapy in turn improves emotional health. Boundaries and limit setting may be lacking in a firesetter, which may be implied from the researched familial environments of known firesetters. Landgarten (1981) stated that the art therapist may structure the tasks to create boundaries and work on limit setting.

The art therapist essentially assesses where the client is at that particular moment and works on that level. From that initial meeting level, the art therapist helps the client work through issues (through the use of art) and brings him/her up to a more age-appropriate level. This is seen through a sense of mastery and achievement (Wadeson, 1980). The goals of art therapy can provide early interventions, devise and implement programs to meet a child's needs. According to Michaux (1987), children who set fires appear to be strongly motivated by their intense need for instinctual gratification while at the same time are overwhelmed by their uncontrollable impulses and are crying for help. In this case, art therapy provides an acceptable form of instinctual gratification, assists the child in developing control and mastery over his/her impulses, reduces anxiety

through the manipulation and control of media, and fosters a sense of self-worth and independence (Michaux, 1987).

Art Therapy and Firesetting.

There seems to be little literature written within the art therapy field that deals with firesetters/firesetting behavior. Hence, there seems to be a deficient amount of information in the field regarding characteristics in the artwork of a firesetter. Many literature searches were performed and no references were located. Databases such as, PsychInfo, Health and Psychosocial Instruments, and ERIC were used with keywords: art assessments, art therapy, projective techniques, problem children, arson, and firesetting. There was one Master's level thesis found on the artwork of firesetters, "Oral Symbolism as Manifested in the Artwork of Latency Aged Firesetters" (Michaux, 1987). Michaux's (1987) thesis concluded that there was more oral symbolism than phallic symbolism that appeared in the artwork of latency-aged children who set fires.

> The artwork of the children in the study revealed a predominance of oral elements which appear to be related to the child's wish for nurturance and love.... It seems that firesetting is both a demand for attention and an act of oral aggressive rage against those who have withheld the attention and failed to meet the child's needs." (Michaux, 1987, p. 88)

The Fire Marshal has observed that often visible in the art of firesetters are flames/fire or a house that is in the shape of fire (personal communication- Fire Marshal). The fire theme is thought to combine anger and the need for warmth (love) (Burns, 1987; Burns & Kaufman, 1970).

The Kinetic-House-Tree-Person.

The Kinetic-House-Tree-Person Drawing (K-H-T-P) was used as the primary art assessment in this study (Burns, 1987). The Kinetic-House-Tree-Person Drawing was one part of a screening/interview procedure at a county-funded fire prevention program. The drawing originated and has been used as a projective test by psychologists (Buck, 1948; Burns, 1987; Hammer, 1980; Kaplan, 2001; Oster & Gould, 1987). The instructions Burns (1987) used for obtaining the Kinetic-House-Tree-Person state "Draw a house, a tree and a person on this paper with some kind of action. Try to draw a whole person, not a cartoon or stick person" (Burns, 1987, p. xvii). Burns also added that the 8-1/2" x 11" paper should be presented horizontally. A number two pencil should be used. The Kinetic-House-Tree-Person drawings completed by the juveniles at the program were modified from Burns' (1987) K-H-T-P, in that they were given colored markers, crayons, a pen, in addition to a number two pencil.

Burns(1987) describes the rationale for this projective drawing when he states that possibly the most frequent and universal metaphor for depicting human development is the tree.

> In drawing a tree, the drawer reflects his or her individual transformation process. In creating a person, the drawer reflects the self or ego functions interacting with the tree to create a larger metaphor. The house reflects the physical aspects of the drama. Thus the interaction and relationship between the house, the tree and the person reflect a visual metaphor created by the drawer, free from the limiting world of words. However, the action and the story of the house, tree and person

metaphors cannot be clearly seen when the figures are drawn on separate pieces of paper. (Burns, 1987, p. 3)

Buck (1948) had developed the H-T-P drawing to be administered on three pieces of paper, whereas Burns (1987) chose to administer the K-H-T-P drawing on only one sheet of paper to see the interactions.

Oster and Gould (1987) wrote about the use of the house and the tree as metaphoric and unconscious representations for the self. They noted that it seems easier to ascribe a greater amount of less desirable personal traits to an inanimate object since it appears more removed from a self-description. The drawing of a person reflects a more direct expression of real life feelings (p. 18). A study conducted by Cooper and Caston (1969) looked at the size of the person drawn before and after stress, the stress being an announcement of impending heart surgery. They found that there was a trend for post-stress drawings by the operated group to increase in size over their pre-stress drawing. The relevance of this study speaks to at least two of the scales in the FEATS (#4 – space, #10 – details of objects and environment, and #12 – person).

In regards to a house drawing, there is an assumption that it will stimulate connections regarding intra-familial relationships including family ties and conflicts surrounding the home life (Hammer, 1980; Oster & Gould, 1987). The emphasis in the construction of this drawing is based on the perceptions of parents and siblings. There is also an assumption that the tree reflects deeper and possibly more unconscious feelings about the self (Oster & Gould, 1987).

Formal Elements Art Therapy Scale.

The Formal Elements Art Therapy Scale (FEATS), which was used as the measurement tool in this study, is a "measurement system for global variables in art" (Gantt, 2001, p. 50). The measurement system was originally developed for the "Draw a person picking an apple from a tree" assessment; however, many of the fourteen scales of the FEATS can be used with other assessments by modifying specific scales. Gantt and Tabone (1998) noticed that in art therapy sessions the subject matter in each drawing is important, but it was not helping them in their study of developing a method for researching diagnostic information. Gantt and Tabone realized they needed to "hold the content constant and see what formal elements varied from group to group" (Gantt, 2001, p. 50). The FEATS has been used with a number of major diagnostic groups such as schizophrenia, major depression, substance abuse, and bipolar disorder as well as adult non-patients and children. Gantt and Tabone (1998) stated that they looked for those attributes found in the formal characteristics, not the symbolic content, of drawings. Just as the symptoms of a psychiatric disorder are beyond the conscious control of an individual so too are the majority of these stylistic attributes (p. 30). They further added that one cannot claim that a particular scale is the actual equivalent of a symptom. Some of the variables may be multiply determined, such as the case with major depression and a depressed mood. Major depression and a depressed mood may both have qualities in the art such as: decreased energy, less color, fewer details, less use of space, and less imaginative problem solving (Betensky, 1987, Gantt & Tabone, 1998, Wadeson, 1980). "At this point in the FEATS development, we must consider that we have a research rather than a clinical scale" (Gantt, 2001, p. 52).

This study is based upon 14 scales in the FEATS that are scored from zero to five or between any two of the numbers. Readers are suggested to refer to the Methodology section and to Appendix A to find information on each of the scales.

CHAPTER III

METHODOLOGY

Design

This is a correlational study using a stratified purposeful sampling procedure. This is a "combination of sampling strategies such that subgroups are chosen based on specified criteria, and a sample of cases is then selected within those strata" (Mertens, 1998, p. 263). The advantage of this type of quantitative study is that several variables can be included. Predictor variables were used because this study does not require experiment manipulation. According to Mertens (1998), a correlational study is recommended to have a sample size of "about 30 observations" (p. 270).

The hypothesis of this research study is that there will be a direct correlation between the formal elements in the art productions and the fire risk levels. Questions arise as to what elements appear in the art productions of children who set fires and are there differences in the art productions of those children identified with different firesetting risk levels? This question is examined through the research study. The study uses the Formal Elements Art Therapy Scale (FEATS) (Gantt & Tabone, 1998) to identify similar and differentiating characteristics between each level of firesetting.

Subjects

Description of subjects.

The ex post facto data in this study were the Kinetic-House-Tree-Person Drawings (extant records) of latency-aged children which were collected as a routine part of the firesetting risk assessment from a local County Fire Marshal's Office/ "Program" (as it will be titled due to confidentiality) located in southwest, New Jersey. This interview/assessment procedure was completed prior to this study in order to place the juvenile firesetters into a fire risk level. Extant data was collected from subject records of juveniles who had been referred to the program because of fire starting (starting at least one fire). All subjects in this study were compliant with the program, which consisted of an interview/assessment procedure. There was no direct contact with human subjects in this study. The program is a county-funded program based in the county's Fire Marshal's Office. Fire personnel, mental health clinicians, police, Division of Youth and Family Services (DYFS), courts, schools, parents, and probation officers have referred children to the fire education/intervention program.

Subject Type.

The sample chosen for this study consists of fifteen boys and fifteen girls (a total of 30 subjects). The subjects are from various racial/ethnic backgrounds as well as various socioeconomic backgrounds. The breakdown of racial/ethnic backgrounds for this study consists of: 11 African American, 2 Asian, 13 Caucasian, 3 Hispanic, and 1 inter-racial juvenile. The ages chosen for this study are six to twelve years old (latency

age). These ages reflect the age of the child at the time of the program's interview and assessment.

Subject selection procedures.

A stratified purposeful sampling procedure was used to select the existing data that qualifies for this research. To insure fairness, the first five males and females from each firesetting level, who met the inclusion criteria, were chosen for the study.

Subjects Inclusion Criteria

- Subjects reside in the selected county
- Subjects are between the ages of 6-12 years old
- Subjects were compliant with the program (risk level established)
- Subjects must have set at least one fire
- Subjects must have a Kinetic House-Tree-Person drawing on file

Subjects Exclusion Criteria

- Subjects are under age 6 or over 12 years old
- Subjects do not reside in the selected county
- Subjects were non-compliant with the program (have not had an interview/assessment)
- Subjects do not have a Kinetic-House-Tree-Person drawing on file

Subject Recruitment

The majority of the subject data was obtained from the 2000-2001 records, while others came from 1995-1999. The program houses each juvenile's chart that contains two evaluations, one survey and artwork (K-H-T-P). A case identification number had been previously given to each child from the Deputy Fire Marshal (Program Director/ Research Assistant). The computer database located in the program's office was used to list cases that match the inclusion criteria, such as firesetter level, age and gender. The research assistant accessed these files and then conducted a search for those files that met the inclusion criteria of this study. The researcher had no access to any identifying information about the subjects except for a new identification number (#1-30) (see Appendix B).

There are three groups, specified by firesetting risk levels (Level One, Level Two, Level Three). Each group consists of five boys and five girls (i.e.-Level One = five boys and five girls; Level Two = five boys and five girls; Level Three = five boys and five girls).

- 10 total subjects in each firesetting risk level (3 total levels)
- 5 girls in each level – 15 total girls
- 5 boys in each level – 15 total boys

This researcher submitted a list of inclusion and exclusion criteria to the Fire Marshal who had access to the files and who acted in the capacity of the research assistant in this study. The research assistant obtained a list of qualifying subjects using the computer database. The first five males and five females of each firesetting level, who meet the inclusion criteria, were chosen for this study. If the inclusion criteria were not

met for a potential participant, the next eligible participant from the database was chosen. Subjects were not identified to the researcher by name or any other personal information that would threaten confidentiality.

Procedures

The ex post facto data for this study had been collected as part of a routine admission assessment procedure conducted with each juvenile enrolled in the program. The procedure of the program included an interview process, a parent questionnaire/survey, and child/family psychological evaluations. Each subject that complied with the program has a confidential file at the Fire Marshal's Office. Included in each file are: a parent questionnaire, a child interview/evaluation form, a family interview/evaluation form, a Kinetic-House-Tree-Person drawing (K-H-T-P), a referral form, an exchange of information form and a fire risk level. As a result of this assessment process a firesetting risk level ranging from one to three was assigned to each child. The program had previously entered the parent questionnaire, child and parent interview/evaluation forms into the computer database that statistically placed the juvenile/family into a fire risk level and further recommended Fire Safety Education, Therapy, and at times, Residential Housing. Level One is considered of little concern for future firesetting. Level Two is considered of definite concern and Level Three is considered of extreme concern for future firesetting or acting out behavior.

The directives to the juvenile for the K-H-T-P drawing given by the interviewer (Program Director or Coordinator) were to use one sheet of paper to draw a house, a tree,

and a person with whatever materials are offered (crayons, markers, pen, # 2 pencil with eraser). The only other instruction given is, "Draw a whole person, not a stick figure."

Once the subjects were selected from the database, the research assistant collected the ex post facto data (K-H-T-P drawings) from the subjects' files. Thirty total drawings were collected from the existing records of 15 male and 15 female firesetters (1 drawing per subject). There were a total of 10 drawings in each of the three firesetting levels, five males and five females in each level. The three fire risk levels were established prior to this study.

The research assistant placed a new identification number on the back of each qualified drawing (#1-30) in order to replace them to the correct file after the study has been completed as well as to maintain confidentiality. The research assistant covered any names that had been previously written on the applicable drawings with a white 'post-it.' The pertinent information: age, gender, race/ethnic background, fire risk level, the existing case identification numbers (not known by this researcher) as well as the new identification number, were written on a data collection instrument (created by this researcher), the Research Assistant's Chart (Appendix C). The Fire Marshal program director/ research assistant stored this chart in his filing cabinet for placement of the drawings back into their original file after the study. The subjects remained anonymous to the researcher. The only information the researcher collected from each qualifying juvenile's file is his or her new identification number, gender, age, ethnic group identification, and fire risk level.

The drawings were taken out of the office, but stored in a sealed folder until the raters score each of them. This folder remained in the researcher's personal filing cabinet

(not in public view or accessibility) until the raters viewed them. After the rating process, the researcher replaced all the drawings back into the sealed envelope. The drawings were later analyzed by this researcher for discussion and then placed back into the filing cabinet.

Operational Definitions of Variables

Kinetic-House-Tree-Person Drawing (Burns, 1987)- A projective drawing that consists of a house, a tree and a person that are obtained on one piece of paper.

Levels of Firesetting Risk:

- Risk Level 1 or Little Concern- "curiosity" or "accidental" firesetter
- Risk Level 2 or Definite Concern- "cry for help" firesetter
- Risk Level 3 or Extreme Concern- uses fire repeatedly as a primitive weapon in a power struggle; chronically angry and rebellious (Sakheim & Osborne, 1991)

FEATS categories:

1. Prominence of Color- "How much color is used? Is the color only used to define an item or shape or is it used to color in the item or shape?"
2. Color Fit- "How well do the colors fit the objects in the drawing? Given the colors in the set of the markers, several are suitable for drawing the person's skin and might relate to an ethnic group identification. However, turquoise, dark blue,

green, dark green, magenta, or purple are not appropriate colors for parts of the body, an entire person, or a stick figure."

3. Implied Energy- "Look at the way in which the picture was drawn, and imagine how much energy and effort it would take if you drew in the same manner. Consider the energy that is necessary to switch colors."
4. Space- "How much space does the drawing occupy in relation to the whole piece of paper? Make an estimate of the total amount of paper covered. Remember that you can mark between the numbers on the scale."
5. Integration- "How integrated is the composition? Look at the overall balance and relationship of the elements to each other."
6. Logic- "Do the components of this picture fit the task? Remember that this is supposed to be "a person picking an apple from a tree." It is important to distinguish between this scale and the next one on realism. An individual element may be recognizable, but it is bizarre or illogical in this particular picture.... Sometimes an element which at first appears to be bizarre is used by the artist in a humorous fashion. If the total effect seems to be intentionally humorous or satirical, do not rate it as illogical."
7. Realism- "Can you recognize all the elements in the picture? The more realistic and three-dimensional the elements are, the higher the rating would be."
8. Problem-Solving- "How effective is the solution for getting the apple out of the tree?" This scale was omitted from the study due to the fact that it does not fit the criteria for the K-H-T-P drawing. There was no problem-solving in this drawing.

9. Developmental Level- "How would this picture be rated according to Lowenfeld's developmental levels? Determining the developmental level is usually done with children's drawings.... The scale is used to give a rough estimate of the developmental level. If children's drawings were being studied, we would need a more finely gauged scale to rate them accurately."
10. Details of Objects and Environment- "How many extra items are there in the drawings? How detailed are the various items?"
11. Line Quality- "How much control did the artist have when drawing the lines in the picture. Consider the "average" of the whole picture."
12. Person- "Does the person look like a person? In making your rating consider the size of the person. Smaller figures may not have as many distinct body parts as larger ones but they still may suggest three-dimensional bodies that are well proportioned."
13. Rotation- "How much rotation is there? Rotation is tilting an object or person relative to an imaginary vertical axis. Score only the person or the tree on this scale. Decide which of these elements appears to tilt more and use that one to determine the score according to this diagram."
14. Perseveration- "Does it seem that any of the lines or elements were drawn repeatedly and without conscious control?... An element may be repeated a number of times; however, this is not perseveration if it appears to be intentional...." (Gantt & Tabone, 1998, Appendix A)

Raters

After gathering the thirty drawings, three Master's degreed and registered art therapists, who were blind to the study, were recruited to rate the drawings. The raters had one brief training session to review the procedure for evaluating the drawings, where the Formal Elements Art Therapy Scale was presented with examples from the manual (Gantt & Tabone, 1998). The raters were not aware of the fire risk level, age or gender of any of the drawings. They were only given the new number in which to identify the drawings (#1-30). The Formal Elements Art Therapy Scale (Gantt & Tabone, 1998) was used to measure the "global" variables within the Kinetic-House-Tree-Person drawing (Burns, 1987). Gantt and Tabone (1998) have demonstrated that individual scales of the FEATS have high inter-rater reliability. The FEATS is a scale that has been used with major depression, bipolar disorder, schizophrenia, and organic mental disorders, but has not been used with firesetters.

Data Analysis.

According to Mertens (1998), a correlational study is recommended to have a sample size of "about 30 observations" (p. 270).

Raters used the scales to rate structural aspects of the artwork of the 30 Kinetic-House-Tree-Person drawings. From the ratings, the frequencies of occurrence of various graphic indicators were calculated. The distributions of the scores on the various scales were then compared between the three risk levels of firesetting in addition to gender differences.

Each rater's scores for the 14 variables and 30 subjects were entered into Microsoft Excel spreadsheets where the mean scores were computed. This researcher was then able to compare and contrast the three risk levels as well as the mean differences between male and female subjects. Each scale was checked for inter-rater reliability, using intraclass correlations through the statistical program, SPSS, before applying them to the 30 drawings (see Figure5). Once the inter-rater reliability was executed, the raw data was computed into charts using Excel spreadsheets. The raw data from the three raters was used to calculate the Mean scores for each of the 14 variables of the FEATS (Gantt & Tabone, 1998) to each drawing. One of the 14 scales, Problem-solving, was discarded because of the lack of applicability to the assessment directive. L. Gantt advised this deletion as per a conversation about this research study.

This researcher used a Pearson product moment correlation to find the relationship between the levels of risk and FEATS scores (see Figure 6). A one-way ANOVA was used to compare males and females for level of risk and FEATS scores (see Figure 7). These tests were run on the program, SPSS.

CHAPTER IV

RESULTS

The major findings of this study were that there are differences in the formal elements of art among the three fire risk levels. The differences are less than one point on each scale. The largest difference is evidenced in the Mean of Scale #13 (Level 1: 4.799; Level 2: 4.08; Level 3: 4.966) with the difference of .89. A Pearson product moment correlation indicated that the correlation between levels of risk and the FEATS scores were not statistically significant: $r = .09$, NS (see Figure 6). A one-way ANOVA was run to find differences between groups, which compared males and females for level of risk and FEATS scores showed: $F(1, 388) = 1.95$, NS (see Figure 7). This test also showed that the differences were not statistically significant between the groups.

This researcher's hypothesis that there would be a direct correlation between the formal elements in the art productions and the fire risk levels, proved true when looking at the Mean scores, however not true when looking at the statistical significance. The hypothesis that the levels would correlate with scores proved true for Level One firesetters only. Level One firesetters tend to have the highest scores on 10 of the 13 scales. Level Two firesetters received the lowest scores in 10 of the 13 scales. Level

Three firesetters tended to have scores in the middle of the scale as indicated by 8 out of 13 scales that were in the middle of Level One and Level Two. There were also differences in the artwork of girls and boys. Level One and Level Three showed that females tended to have higher-end scores. Females had lower-end scores in Level One and Level Three, however, displayed higher-end scores in Level Two. This does not infer that males were healthier in Levels One and Three. Large-scale studies would need to be done in order for one to state that higher scores equal healthy people. See Figures 1,2 and 3 to view the Mean scores for Levels One, Two and Three displaying gender differences. See Figure 4 to view the Mean score of Level One, Two and Three combined for each of the 13 variables. Although there were noted differences in the artwork of Level One, Two and Three as well as gender differences, there were no statistically significant differences.

The statistical program, SPSS for Windows was used to obtain the results for inter-rater reliability utilizing average measure intraclass correlations (see Figure 5). The r (correlation) and p (significance) values, in addition to the range (lower and upper limits), were obtained by this test. There were no tests done to correct the alpha (p value), therefore the data reported shows the uncorrected alpha. According to Mertens (1998), a correlation above .60 is considered to be adequate for group predictions, and above .80 for individual predictions (p. 98).

Inter-rater reliability of the 13 scales indicated that two of the scales were not as reliable as the others amongst the three raters. The two scales that held lower reliability were Scales # 6 (logic) ($r = .55, p < .01$) and # 11 (line quality) ($r = .41, p < .05$).

FIGURE 1

Level One Mean: Male & Female

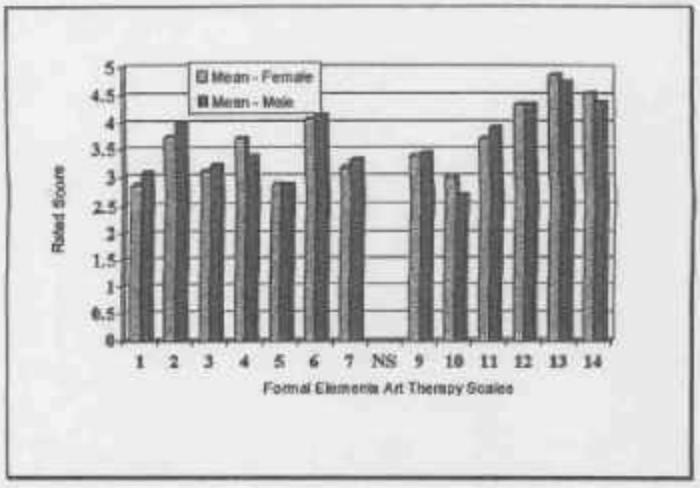
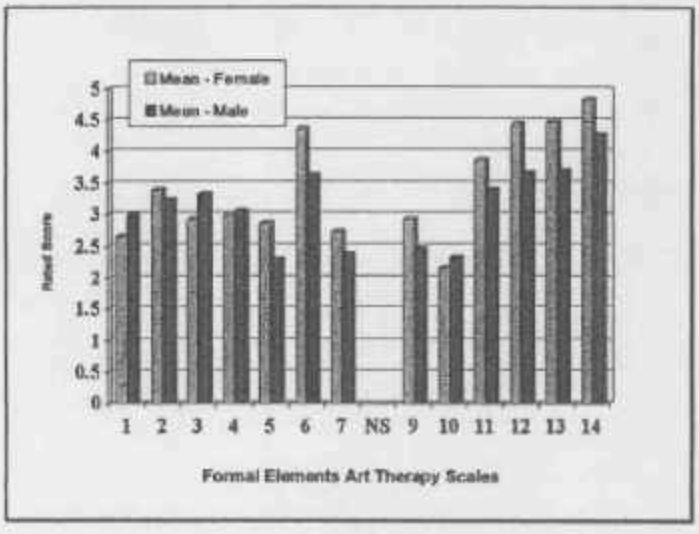


FIGURE 2

Level Two Mean: Male & Female



Note. Mean scores were calculated by adding the 3 rated scores for each of the 30 drawings then dividing the sum by three. (R1 + R2 + R3= Sum; Sum /3= Mean)

FIGURE 3

Level Three Mean: Male & Female

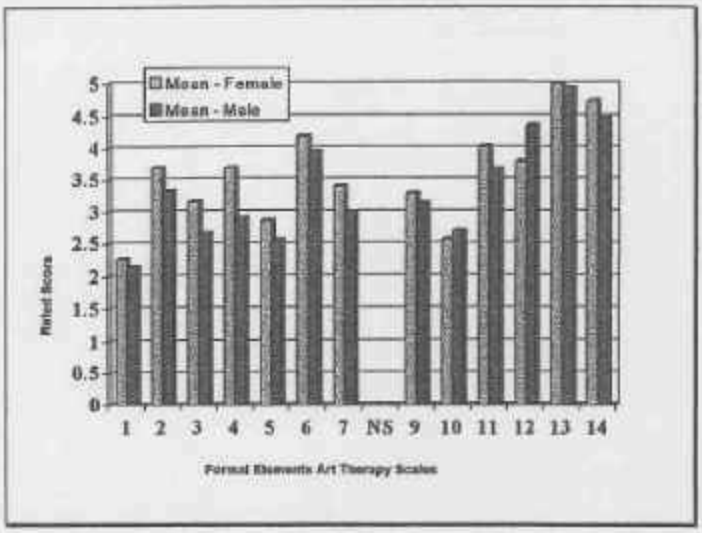
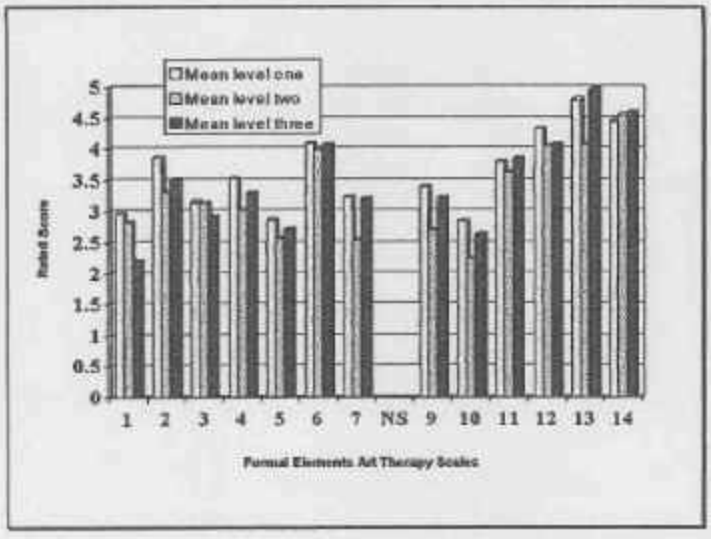


FIGURE 4

Mean Score: Level One, Two & Three



Note. Mean scores were calculated by adding the 3 rated scores for each of the 30 drawings then dividing the sum by three. (R1 + R2 + R3= Sum; Sum /3= Mean) Fig.4. Mean scores of all Level One, Level Two & Level Three were calculated by adding male & female scores, then dividing by three.

FIGURE 5

Inter-rater Reliability: Intraclass Correlations

Formal Elements Art Therapy Scales	*r* value	*p* value	Lower & Upper Limits
Drawings	($n = 30$)		
1: Prominence of color	.93	<.01	.8665 / .9638
2: Color fit	.67	<.01	.3963 / .8323
3: Implied energy	.70	<.01	.4528 / .8480
4: Space	.86	<.01	.7471 / .9314
5: Integration	.72	<.01	.4803 / .8590
6: Logic	.55	<.01	.1743 / .7707
7: Realism	.79	<.01	.6145 / .8929
8: Problem-solving	N/A	N/A	N/A
9: Developmental level	.83	<.01	.6819 / .9116
10: Details of objects & environment	.68	<.01	.4103 / .8400
11: Line quality	.41	<.05	.0810 / .6998
12: Person	.72	<.01	.4775 / .8583
13: Rotation	.94	<.01	.8884 / .9690
14: Perseveration	.64	<.01	.3371 / .8159

FIGURE 6

Pearson Product-Moment Correlation

		GENDER	LEVEL	Mean of RATERS
GENDER	Pearson Correlation	1.000	.000	-.071
	Sig. (2-tailed)	.	1.000	.163
	N	390	390	390
LEVEL	Pearson Correlation	.000	1.000	-.085
	Sig. (2-tailed)	1.000	.	.092
	N	390	390	390
Mean of RATERS	Pearson Correlation	-.071	-.085	1.000
	Sig. (2-tailed)	.163	.092	.
	N	390	390	390

Note: r=.09, NS

FIGURE 7

One-way ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
LEVEL	Between Groups	.000	1	.000	.000	1.000
	Within Groups	260.000	388	.670		
	Total	260.000	389			
MEAN of RATERS	Between Groups	1.973	1	1.973	1.949	.163
	Within Groups	392.781	388	1.012		
	Total	394.754	389			

Note: F (1, 388) = 1.95, NS

CHAPTER V

DISCUSSION

The results of this study may help to expand the information that seems to lack in the field of art therapy. The problem is that there is limited literature about art therapy assessments that focus on juvenile firesetters, or firesetters of any age for that matter. There is a need for valid, reliable and practical assessments when dealing with firesetters. Wilcox (2000) stated, "What we lack, for all of our experience with these children and their behavior, is a systematic way of knowing about firesetting behavior that can stand up to the demands and scrutiny of behavioral science. What we lack is good research" (p. 2).

Limitations of the Study

There is no way to know, without further investigations in the artwork of juvenile firesetters, that one may be identified as a firesetter. There is no proof of this in previous research or this research study. This study looks at identifiers in the artwork of a firesetter. Because of the statistical outcome in this study, as well as the small sample size, the proposed rating guide could not be created. If there were in fact statistical significances between the group differences as well as the correlations, the global variables in the FEATS may have been used to develop a new rating guide for testing firesetters. This rating guide would have been developed in order for clinicians, fire personnel, and others working with juvenile firesetters to place them into fire risk levels

more quickly for proper treatment. Getting a child the proper treatment needed in a quick fashion may put an end to recidivism.

There was a biasing factor in the selection of raters. This researcher chose three raters that were registered and board certified art therapists. All attended the same university where they obtained their Master's degrees. There was one training session before the rating began, which included all three raters. This consisted of reviewing the FEATS (Gantt & Tabone, 1998) manual and rating sheet. The raters questioned at least two scales during the rating process, such as scale #5 – Integration, #6 – Logic. Scale #8-Problem-solving was deleted from the study because it did not fit the K-H-T-P drawing. The raters used all 14 scales, however, before this researcher analyzed the data, then scale #8 was deleted. Linda Gantt, the creator of the FEATS (Gantt & Tabone, 1998) advised this researcher to delete this scale before analyzing the data. Deleting it from the study was done because there was no problem solving asked in the K-H-T-P. The FEATS (Gantt & Tabone, 1998) was originally designed for another type of drawing that required problem-solving, however the scales are applicable to other drawings

Scale # 5 (integration) was reported by the three raters to be "ambiguous" in that there was only one person in directive for the K-H-T-P; they were unsure what the interaction involved. Although the raters reported trouble with this scale, intraclass correlations showed that there was a 72 % agreement between them. Scale # 6 (logic) did not have a strong correlation between the three raters (55% agreement). It was however, statistically significant with a $p < .05$. Scale #11 (line quality) did not have strong inter-rater reliability ($p < .05$) and only had 41% agreement between the three raters, however, this scale was not questioned as being problematic amongst the raters.

According to Gantt (1998), higher or lower end scores/numbers "indicate more or less of a particular variable. However, higher scores are not necessarily better than lower ones" (p. 28). The scores may be seen on a continuum with lower end scores leaning towards depression and higher end scores leaning towards mania. An example of this would be the use of color. Little or no use of color in the drawing would score a low number on the FEATS and could possibly indicate depression (of course along with other indicators) (Gantt, 1998, p. 31).

This researcher believed that lower-end scores (scores of 0, 1, 2) on the FEATS would correlate with the higher firesetting level (Level Three) and higher-end scores, such as 4 or 5, on the FEATS would correlate with the lower firesetter (Level One). The fact that Level One scored the highest on 10 out of the 13 scales begins to prove the hypothesis (Scale #1,2,3,4,5,6,7,9,10). The fact that Level Two scored the lowest on 10 out of 13 scales disproves the hypothesis (Scale #2,4,5,6,7,9,10,11,12,13). If the hypothesis proved accurate, Level One would have had the highest scores, Level Two would have had the middle scores, and Level Three would have had the lowest scores. The Pearson product moment correlation was conducted to come to the conclusion that although there were Mean differences, there were no statistically significant correlations. In terms of looking at each of the 13 scales of the FEATS in relation to the levels, Level One was rated the highest scores in scales: #1 (prominence of color), 2 (color fit), 3 (implied energy), 4 (space), 5 (integration), 6 (logic), 7 (realism), 9 (developmental level), 10 (details of objects and environment), 11 (line quality), and 12 (person). Level Two was not rated with the highest scores in any of the scales. Level Three rated with the highest scores on two scales, #13 (rotation) and 14 (perseveration).

In terms of looking at the 13 scales of the FEATS in relation to gender, females were rated with the highest scores overall in scales: #1(prominence of color), 2 (color fit), 3 implied energy), 4 (space), 5 (integration), 6 (logic), 7 (realism), 9 (developmental level), 11 (line quality), 13 (rotation) and 14 (perseveration). Males were only rated with the highest scores in two scales: #10 (details of objects and environment) and 12 (person).

Another question answered by this study was the fact that males and females artwork differed. Drawings from males tended to score higher than females in both Levels One and Three. This does not infer that males were healthier in Levels One and Three. Large-scale studies would need to be done in order for one to state that higher scores equal healthy people. These scores proved to be not statistically significant. The One-way ANOVA test was conducted to find significance in these results. It was found that there were no statistically significant differences between the groups.

The Artwork

The primary evaluation of the artwork in this study was accomplished by using the FEATS. It also seems appropriate, at this point, to explore the artwork from a different perspective—perhaps a more clinical view.

Plates 1, 2, 3, 4, 5, and 6 are samples of the K-H-T-P drawings obtained for this study. Each firesetting risk level gives an example of female and male drawings. Plates 1 and 2 were both considered Level One firesetters. They were both 12 years old at the time of the drawing. Plates 3 (9 years old) and 4 (12 years old) were previously given Level Two status. Plates 5 and 6 are examples of the artwork from Level Three firesetters

(8 and 10 years old, respectively). It should be noted that all of the plates are scanned copies of the original drawings and the background color has changed through this process. The original K-H-T-P drawings were on white paper.

Overall, looking at the 30 K-H-T-P drawings together, it was noted that brown and green appeared the most. Brown was indicated in the chimney, roof, trees and person 25 times out of the 30 drawings. Brown could possibly be a representation of burned parts that were previously set aflame. Because this researcher did not administer the assessment and gain associations to each drawing, this interpretation is only an opinion. Green was indicated as many times as brown, but in the tree, grass, house and person. Blue was found in the sky, house, clouds, person, grass, and tree 23 times. One may hypothesize that blue represents water that puts out and eliminates fires.

Yellow, red and orange (fire colors) were prominent in the drawings but not nearly as much as brown and green. Yellow (18 times) was found in the sun, in the windows, the house, person, tree and grass. Red (15 times) was colored in the house, the windows and curtains, and person. Orange was found only three times within the 30 drawings, in the house, tree and person. It was stated by the research assistant that fire colors seem to appear in the artwork of juvenile firesetters. In this study, the findings were not the same as the above claim.

Chimneys were visible on eight drawings and five of the eight had smoke coming from the chimney. Plate 3 appears to have a tree behind the house; however, it may also be a smoking chimney. Two chimneys can be seen in Plates 5 and 6 on the right side of the house/roof. It can be noted that both of the chimneys in these drawings are not drawn vertically, but are drawn on an angle. Piaget and Inhelder (1967) (as cited in Silver,

1996), stated, "When five-year-olds are asked to draw trees or houses on the outline of a mountain, they tend to draw them inside the outline; later, they draw them perpendicular to the slope; and not until the age of eight or nine do they tend to draw them upright" (p. 12). The ages of the juveniles who drew Plates 5 and 6 were 8 and 10 years old respectively at the time of the drawing.

Males held the paper on a vertical axis four times; females held the paper on a vertical axis two times (These two times were from the same person who did not follow the directions and drew three separate drawings for the H-T-P). A professor at MCP Hahnemann University stated that paper held on a vertical axis appears to be more aggressive (male role) and paper held on a horizontal axis appears more passive (female role). If this statement is true, then males in this study may be more aggressive than females and use firesetting as a form of acting out behavior.

It seemed as though females used more space on the paper than males. This is evidenced in the differences between Plates 1 and 2, Plates 3 and 4, as well as Plates 5 and 6. It could be hypothesized that females "acted out" and drew their K-H-T-P drawings more expansively, using most of the paper. The drawings from the males appeared more depressed in that it appeared to lack energy, investment and space on the paper (Wadeson, 1980). If gender was put on a bipolar continuum from depressed to manic, males would appear on the depressed end and females would appear on the manic end. Overall, out of the 30 K-H-T-P drawings, females seemed to be more expansive, use more energy, be more realistic, and have a more fluid/flowing line quality.

Males in Level One and Level Two (see Plate 2 and 4) drew their person as a stick figure. Females in these levels (see Plate 1 and 3) drew their person as a full-bodied

person. It appeared that all of the females in the provided plates illustrate all of the features of the face (eyes, nose, mouth). The males in these examples appear to lack descriptive facial features, or they are unrecognizable. The lack of investment may also be seen in these examples. This lack of effort may be a denial of one's own body. Body image issues may be a conflict in the male firesetters chosen for this study. Another hypothesis to the stick figure and full body distinction between males and females may be the scheme for females. They may be more detailed oriented and notice appearances of other women.

Plate 1

Level One: Female

Plate 2

Level One: Male

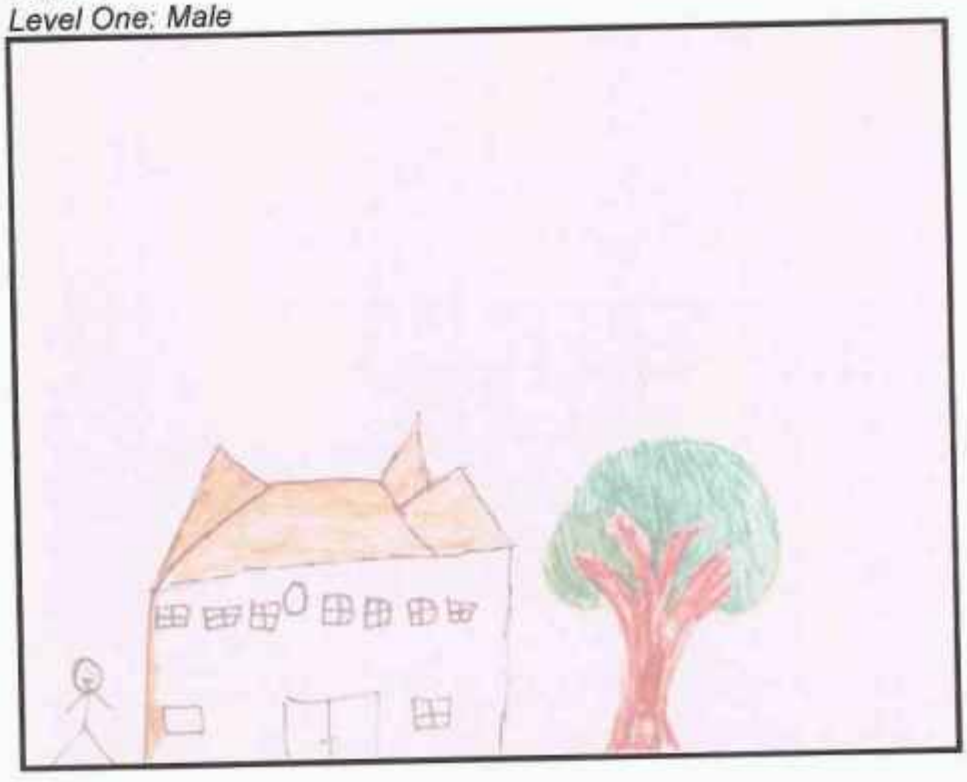


Plate 3
Level Two: Female

Plate 4
Level Two: Male

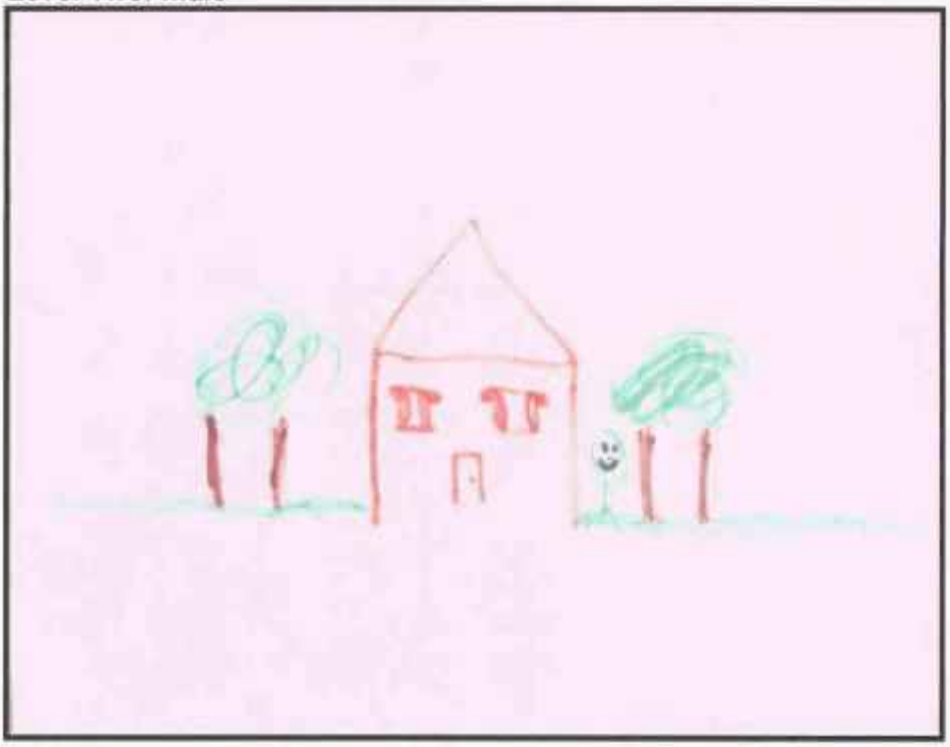
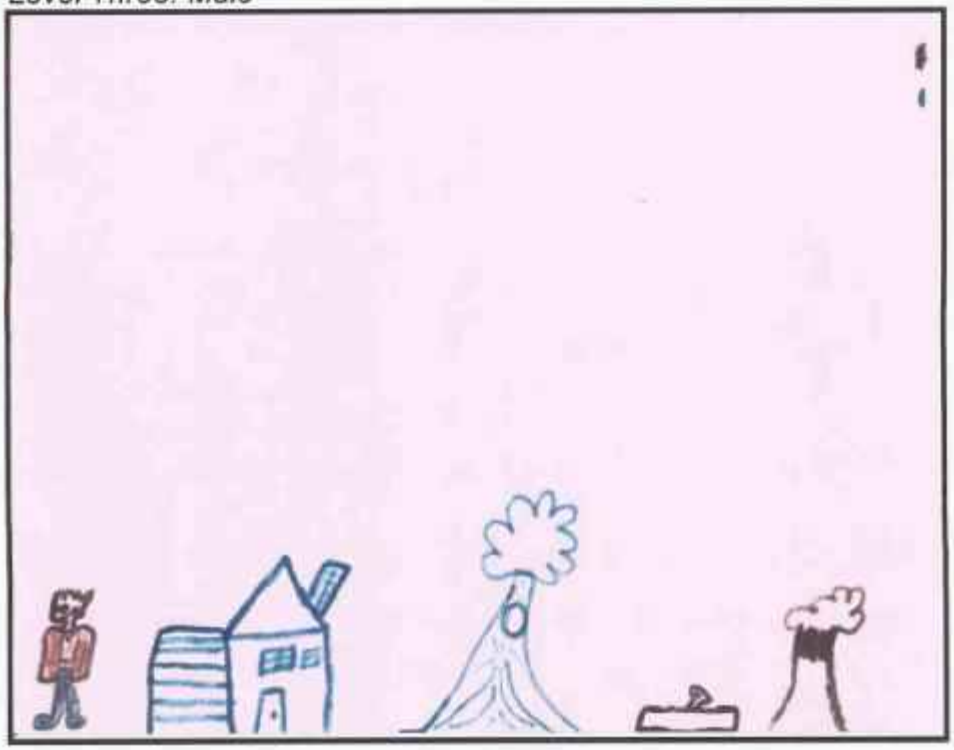


Plate 5
Level Three: Female

Plate 6
Level Three: Male



Threats to validity

An extraneous variable that may have the ability to threaten internal validity is the possibility of prior psychiatric diagnoses. Experimenter effect may also be a threat to validity. The 'experimenter' in this case was the Deputy Fire Marshal, because he gave the assessments/interviews. The researcher was not present at the time of the assessment/interview with any of the children.

Another threat to validity may be the fact that the K-H-T-P drawing was studied with the FEATS, which has not been used in conjunction until this point. The drawing specified for the FEATS is the Draw a Person Picking an Apple from a Tree (PPAT) (Gantt, 1998).

Implications and recommendations for future directions

The results of the research can be useful data to fire investigation (and corresponding fields) and to the field of art therapy. Earlier interventions may be utilized if a child completes an art assessment such as the K-H-T-P and a clinician is educated about this study. Others may note the differences seen in the artwork of a child firesetter and be able to distinguish the child's level of firesetting. Also, a clinician may be able to detect a firesetting behavior, first seen in the artwork, before the behavior follows it. Intervention may then be required to help alleviate and work through the latent thoughts of a non-firesetter and may also help before recidivism occurs in the known firesetter.

The benefit of this research is that it adds to the existing literature in associated fields (fire and mental health) and begins to build literature in art therapy. It may lead others to related topics in child firesetting and art therapy. Recurrent themes in the

artwork may be further researched in child firesetters. Further research that explores the artwork of firesetters versus a non-firesetter population may be a useful follow-up to this study. A larger sample size would be preferable and may add validity to the study.

Other ways to look at or measure the FEATS according to content or psychiatric diagnosis may be used as future research ideas. If a particular population is established according to a diagnosis, interval drawings may be used at various times throughout the study (six months and one year follow-up, possibly longer including a larger amount of drawings). Baseline drawings could help establish whether or not firesetting tendencies have decreased or increased.

A recommendation for replication of this study would be useful to the following fields: art therapy, mental health, fire (fire prevention/intervention programs, personnel, etc). Additional suggestions to researchers would be to use three registered art therapists as well as three non-mental health people (with no art therapy background). It seemed in this study that the three raters looked too deeply into each of the 30 drawings rather than trusting their first inclinations. Art therapists are trained to look at art for latent and manifest content, which give clues to diagnosis, cognitive levels, developmental levels, etc. Each of the raters should be blind to the study and should all receive the same amount of training on the fourteen variables of the Formal Elements Art Therapy Scale (Gantt & Tabone, 1998). This training would be the established standard.

Looking at the quantitative and qualitative aspects of drawings at the same time may be another approach to a future study. Some researchers believe that the essence of the art is lost when quantifying it into linear form. On the other hand, qualitative research

can be vague and subjective. It may be hard to remain objective. However, studying both types of research together may be beneficial.

The practical application of this research may benefit the fire and mental health field, only with follow-up studies. If this study were generalizable, there would be a value to the field. Generalizing the results could mean that a Level One male firesetter's artwork in New Jersey looks the same as a Level One male in California. Or, a clinician could place a juvenile into a firesetting level by studying the artwork. This is impossible to hypothesize because of many factors such as a small sample size, the limiting area in New Jersey, and the results found (no statistically significant differences). One is not able to generalize the results because firesetters in southwest, New Jersey are different from that of other parts of the country. Each city and state in the United States are unique and the juveniles across the country may have different motives for starting fires because of environmental factors.

With a valid art therapy assessment that holds reliable with juvenile firesetters, an art therapist may find employment in fire prevention and intervention programs and courts. It would be useful to get fast results with a drawing rather than long, drawn-out interviews and unnecessary multiple choice and verbal assessments. Drawings have the ability to look into the unconscious of the individual, where issues may be evident. These issues that are unresolved may be too heavy for a juvenile to control, and they lose essentially explode in their own way. Firesetting may be one of these behaviors. It would be helpful to catch these issues before they harbor into costly and even deadly ones.

CHAPTER VI

SUMMARY AND CONCLUSIONS

The purpose of this study was to explore the graphic indicators in the artwork of 30 child firesetters, between the ages of 6-12, who have been identified to be in high to low risk firesetting levels. Questions arose such as: How are the risk levels of firesetting manifested in the art productions of 6-12-year-old children with a history of firesetting? Can a rating scale distinguish different risk levels? Are there differences in the formal elements of art among the three fire risk levels? Do boys and girls within each firesetting level display similar or differentiating formal elements?

The hypothesis of this research was that there would be a direct correlation between the formal elements in the art productions and the fire risk levels. The results from the study were to be used to help characterize the artwork of each of the three firesetting levels in order to develop a scale that can be used to rate the art productions of juvenile firesetters. The objective of the research was to develop a guide that would help to distinguish between levels of risk and assist in early prevention and intervention implementation. The development of a scale or guide seems out of the reach of this study. It is difficult to generalize from this study what the artwork of juvenile firesetters would

look like in other areas of the state or country. More research needs to be conducted in order to come up with such a guide or scale.

There were differences found in the Mean scores of formal elements in the artwork of latency-aged juvenile firesetters placed in the three risk levels. Although these distinctions are not strikingly obvious, there are definitely variations in the formal elements of the K-H-T-P drawing within the three firesetting risk levels. There were no statistically significant correlations between the level of risk and the FEATS scores. There were also no statistically significant differences between the groups that compared males and females for level of risk and the FEATS scores.

There is a possibility that firesetters were placed in incorrect firesetting levels. If this statement were true, then Level Two drawings would look like the Level Three drawings and vice versa. Level Two drawings scored the lowest in all but three scales (#1,3,14). This researcher believed that Level Three firesetters would score the lowest ratings and that hypothesis was not correct as proven by the results.

REFERENCES

Adler, R., Nunn, R., Northam, E., Lebnan, V., Ross, R. (1994). Secondary prevention of childhood firesetting. *Journal of the American Academy of Child & Adolescent Psychiatry, 33* (8), 1194-1202. US: Williams & Wilkins Co.

Betensky, M.G. (1987). Phenomenology of therapeutic art expression and art therapy. In J. A. Rubin (Ed.), *Approaches to art therapy: Theory and technique* (pp.149-166). Levittown, PA: Brunner/Mazel.

Boberg, J. & Thomas, J. (2001). *Phoenix fire department: Youth firesetter intervention program parent guide*. Phoenix, AZ: Phoenix Fire Department Youth Firesetter Intervention Program Team.

Buck, J. N. (1948). The H-T-P technique, a qualitative and quantitative scoring method [Monograph]. *Journal of Clinical Psychology, 5*, 1-120.

Bumpass, E.R., Fagelman, F.D., Brix, R.J. (1983). Intervention with children who set fires. *American Journal of Psychotherapy, 37* (1), 328-45.

Burns, R.C. (1987). *Kinetic-house-tree-person drawings (K-H-T-P): An interpretive manual.* New York: Brunner/Mazel.

Burns, R.C. & Kaufman, S.H. (1970). *Kinetic family drawings (K-F-D): An introduction to understanding children through kinetic drawings.* New York: Brunner/Mazel.

Cool, L.C. (1997). Playing with fire. *Penthouse Magazine International, October*, 24-28, 34, 63, 135, NY: Bob Guccione, Penthouse Magazine International.

Cooper, L. & Caston, J. (1969). Size of human figures drawn before and after stress. *Perceptual and Motor Skills, 29*, 57-8.

Dvoskin, J. & Koson, D.F, & Meyer, E.C. (1985). Aggression and psychopathology in childhood firesetters: Parent and child reports. *Journal of Consulting and Clinical Psychology 53* (3), 377-385.

Federal Emergency Management Agency/United States Fire Administration. (1994). *The national juvenile firesetter/arson control and prevention program.* (FA-145-148).

Fineman, K.R. (1997). *Fire Service Professional Test Version 2.000.*

Focus Adolescent Services. (2000). *Firesetting and Youth*. U.S. Fire Administration.

Gantt, L. (2000). Assessments in the creative arts therapies: Learning from each other. *Music Therapy Perspectives: American Music Therapy Association, 18* (1), 41-46.

Gantt, L.M. (2001). The formal elements art therapy scale: A measurement system for global variables in art. *Art Therapy: Journal of the American Art Therapy Association, 18*(1), 50-55.

Gantt, L., & Tabone, C. (1998). *The Formal Elements Art Therapy Scale: The rating manual*. Morgantown, WV: Gargoyle Press.

Gaynor, J., & Hatcher, C. (1987). *The psychology of child firesetting*. New York: Brunner/Mazel.

Geller, J.L. (1992). Arson in review: From profit to pathology. *The Psychiatric Clinics of North America, 15* (3), 623-645.

Gross, C., Boberg, J., McCloe, D., & Bartunek, N. (2001). *Phoenix fire department youth firesetter intervention program.* Phoenix, AZ: Youth Firesetter Intervention Program Team.

Hacking, S., & Foreman, D. (2000). The descriptive assessment for psychiatric art (DAPA). *The Journal of Nervous and Mental Disease, 188* (8), 525-529.

Hall, J.R. (1998). The truth about arson. *NFPA Journal,* pp. 59-67.

Hall, J.R. (2000). *Children playing with fire.* Quincy, MA: National Fire Protection Association.

Hamling, J.E. (1995*). A psychodynamic classification system for pathological firesetters with treatment strategies for each subgroup*. Available: http://www.ozemail.aust.com/~jsjp/fireset.htm

Hammer, E. (1980). *The clinical application of projective drawings*. Springfield, Illinois: Charles C. Thomas.

Jayaprakash, S., Jung, J., & Panitch, D. (1984). Multi-factorial assessment of hospitalized children who set fires. *Child Welfare, LXIII* (1), 74-78, New York, New York: Child Welfare League of America.

Kaplan, F.F. (2001). Areas of inquiry for art therapy research. *Art Therapy: Journal of the American Art Therapy Association, 18* (3), 142-147.

Kazdin, A.E. & Kolko, D.J. (1986). Parent psychopathology and family functioning among childhood firesetters. *Journal of Abnormal Child Psychology, 14* (2), 315-329.

Kolko, D.J. (1985) Juvenile Firesetting: A review and methodological critique. *Clinical Psychology Review 5* (31), 345-378.

Kolko, D.J. & Kazdin, A.E. (1986). A conceptualization of firesetting in children and adolescents. *Journal of Abnormal Child Psychology 14* (1), 49-61.

Kolko, D.J. & Kazdin, A.E. (1989). Assessment of dimensions of childhood firesetting among patients and nonpatients: The firesetting risk interview. *Journal of Abnormal Child Psychology, 17* (2), 157-176.

Kolko, D.J. & Kazdin, A.E. (1989). The children's firesetting interview with psychiatrically referred and nonreferred children. *Journal of Abnormal Child Psychology, 17* (6), 609-624.

Kolko, D.J. & Kazdin, A.E. (1990). Matchplay and firesetting in children: Relationship to parent, marital, and family dysfunction. *Journal of Clinical Child Psychology,19* (3), 229-238.

Kolko, D.J. & Kazdin, A.E. (1992). The emergence and recurrence of child firesetting: A one-year prospective study. *Journal of Abnormal Child Psychology, 20* (1), 17-37.

Kolko, D.J. & Kazdin, A.E. (1994). Children's descriptions of their firesetting incidents: Characteristics and relationship to recidivism. *Journal of the American Academy of Child & Adolescent Psychiatry, 33* (1), 114-122.

Kolko, D.J., Kazdin, A.E., & Meyer, E.C. (1985). Aggression and psychopathology in childhood firesetters: Parent and child reports. *Journal of Consulting and Clinical Psychology, 53* (3), 377-385.

Kosen, N. & Dvoskin, J. (1982). Arson: A diagnostic study. *Bulletin of the American Academy of Psychiatry and Law, 10* (1), 39-49.

Lewis, N., & Yarnell, H. (1951). Pathological firesetting pyromania. *Nervous and Mental Disease Monographs, 82*. Nicholasville, KY: Coolidge Foundation Publishers.

Linesch, D.G. (1988). *Adolescent art therapy*. New York: Brunner/Mazel, Publishers.

Lowenfeld, V., & Brittain, W.L. (1987). *Creative and mental growth*. New York: Macmillan Publishing Co.

Lowenstein, L. F. (1989). The etiology, diagnosis and treatment of the fire-setting behaviour of children. *Child Psychiatry and Human Development, 9* (3). U.K.: Human Sciences Press.

Lusebrink, V.B. (1990). *Imagery and visual expression in therapy*. NY & London: Plenum Press.

Macdonald, J.M. (1977). *Bombers and firesetters*. Sringfield, Illinois: Charles C. Thomas.

Mertens, D.M. (1998). *Research methods in education and psychology: Integrating diversity with quantitative and qualitative approaches*. London: SAGE Publications.

Michaux, S.M. (1987). *Oral symbolism as manifested in the artwork of latency aged firesetters*. Unpublished master's thesis, Hahnemann Univeristy, Philadelphia, Pennsylvania.

Milrod, L.M., & Urion, D.K. (1992). Juvenile fire setting and the photoparoxysmal response. *Annals of Neurology, 32*, 222-224.

Nurcombe, B. (1964). Children who set fires. *The Medical Journal of Australia, 1*, 579-584.

Orange County Fire Authority. (1999). *Orange county fire f.r.i.e.n.d.s.*.

Oster, G.D. & Gould, P. (1987). Using drawings in assessment and therapy: A guide for mental health professionals. New York: Brunner/Mazel.

O'Sullivan, G.H. & Kelleher, M.J. (1987). A study of firesetters in the south-west of Ireland. *British Journal of Psychiatry, 151*, 818-823.

Pontius, A. (1999). Motiveless firesetting: Implicating partial limbic seizure kindling by revived memories of fires in "limbic psychotic trigger reaction." *Perceptual and Motor Skills, 88*, 970-982.

Rubin, J.A. (1984). *Child art therapy: Understanding and helping children grow through art*, 2nd ed. John Wiley & Sons, Inc.

Sakheim, G.A. & Osborn, E. (1986). A psychological profile of juvenile firesetters in residential treatment: A replication study. *Child Welfare, LXV* (5), 495-503.

Sakheim, G.A. & Osborn, E. (1991). Toward a clearer differentiation of high-risk from low-risk fire setters. *Child Welfare, 70* (4), 489-504.

Saunders, E.B. & Awad, G.A. (1991). Adolescent female firesetters. *Canadian Journal of Psychiatry, 36*, 401-404.

Schwartzman, P., Stambaugh, H., & Kimball, J. (1998). *Arson and juveniles: Responding to the violence: A review of teem firesetting and interventions* (Federal Emergency Management Agency/United States Fire Administration Rep. No. 095). Major Fires Investigation Project: Varley-Campbell and Associates, Inc./TriData Corporation.

Showers, J & Pickrell, E. (1987). Child firesetters: A study of three populations. *Hospital Community Psychiatry, 38*, 495-501.

Silver, R (1996). *Silver drawing test of cognition and emotion*. Sarasota, FL: Ablin Press Distributors.

Sullivan, E. & Laughlin, J. (2002, February 10). Trail of fire: Family, officials say arson suspect needs help, but is unlikely to get it [Special report]. *Courier-Post*, pp. A1, 10A, 11A.

Wadeson, H. (1980). *Art psychotherapy.* NY: John Wiley & Sons.

Wadlington, W.L., & McWhinnie, H.J. (1973). The development of a rating scale for the study of formal aesthetic qualities in the paintings of mental patients. *Art Psychotherapy, 1*, 201-220.

Whelan, R.T., Fonte, D.M., & Braig, A.R. (I. Shulz, Ed.). (2001). *FireWatch: Juvenile firesetter education and intervention program manual* (3rd ed.). New Orleans, LA: Syndistar.

Wilcox, D. (2000). How do we know what we know about firesetting behavior?...some thoughts on research design in the study of juvenile firesetting behavior [Electronic version]. *Hot Issues, 10* (4), 1-14. Available: http://216.239.51.100/search?q=cache:pHAbjtD3R1YC:1.../HIFall00.pdf+psychological+testing+for+firesetters&hl=en&ie=UTF-8

Appendix A: Formal Elements Art Therapy Scale (FEATS) Rating Sheet
(Gantt & Tabone, 1998)

Picture #:_____
Rater: _____

FORMAL ELEMENTS ART THERAPY SCALE (FEATS) ©
RATING SHEET

Linda Gantt, Ph.D., ATR-BC, & Carmello Tabone, M.A., ATR

The FEATS uses scales that measure more or less of the particular variable. Look at the degree to which a picture fits the particular scale by comparing the picture you are rating with the examples in the illustrated rating manual. **You may mark between the numbers on the scales.** Approach the picture as if you did not know what it was supposed to be. Can you recognize individual items? If you have a picture that is hard to rate, do your best to compare it to the illustrations and the written descriptions. Do not worry whether your rating is the same as another rater's. Concentrate on giving your first impression to the variable being measured.

#1 – Prominence of Color

Color used for outlining only	0 | 1 | 2 | 3 | 4 | 5	Color used to fill all available space

#2 – Color Fit

Colors not related to task	0 | 1 | 2 | 3 | 4 | 5	Colors related to task

#3 – Implied energy

No energy	0 | 1 | 2 | 3 | 4 | 5	Excessive energy

#4 – Space

Less than 25% of Space used	0 | 1 | 2 | 3 | 4 | 5	100% of space used

#5 – Integration

Not at all integrated	0 | 1 | 2 | 3 | 4 | 5	Fully integrated

#6 – Logic

Entire picture is Bizarre or illogical	0 | 1 | 2 | 3 | 4 | 5	Picture is logical

#7 – Realism

Not realistic (cannot tell what was drawn)	0 | 1 | 2 | 3 | 4 | 5	Quite realistic

#8 – Problem-solving

No evidence of problem-solving	0 | 1 | 2 | 3 | 4 | 5	Reasonable solution to picking apple

#9 – Developmental Level

Two-year-old level	0 | 1 | 2 | 3 | 4 | 5	Adult level

#10 – Details of Objects and Environment

No details or environment	0 | 1 | 2 | 3 | 4 | 5	Full environment, abundant details

#11 – Line Quality

Broken, "damaged" lines	0 | 1 | 2 | 3 | 4 | 5	Fluid, flowing lines

#12 – Person

No person depicted	0 | 1 | 2 | 3 | 4 | 5	Realistic person

#13 – Rotation

Pronounced rotation	0 | 1 | 2 | 3 | 4 | 5	Trees & people, upright, no rotation

#14 – Perseveration

Severe	0 | 1 | 2 | 3 | 4 | 5	None

Appendix B: Data Collection Instrument - Researcher's Chart

Level One

New #	Gender	Age	Ethnic Status
	F		
	F		
	F		
	F		
	F		
	M		
	M		
	M		
	M		
	M		

Level Two

New #	Gender	Age	Ethnic Status
	F		
	F		
	F		
	F		
	F		
	M		
	M		
	M		
	M		
	M		

Level Three

New #	Gender	Age	Ethnic Status
	F		
	F		
	F		
	F		
	F		
	M		
	M		
	M		
	M		
	M		

Appendix C: Data Collection Instrument – Researcher Assistant's Chart

Level One				
New #	Case ID	Gender	Age	Ethnic Status
		F		
		F		
		F		
		F		
		F		
		M		
		M		
		M		
		M		
		M		

Level Two				
New #	Case ID	Gender	Age	Ethnic Status
		F		
		F		
		F		
		F		
		F		
		M		
		M		
		M		
		M		
		M		

Level Three				
New #	Case ID	Gender	Age	Ethnic Status
		F		
		F		
		F		
		F		
		F		
		M		
		M		
		M		
		M		
		M		